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## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: HOA VAN LE Examiner #: 60626 Date: 03/13/03  
Art Unit: 1752 Phone Number 308-2295 Serial Number: 10/051,667  
Mail Box and Bldg/Room Location: CP3-9B10 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): \_\_\_\_\_

*Please see the attachment*

Earliest Priority Filing Date: \_\_\_\_\_

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

① please search for compounds of the general formulas I and II

② compounds in "①" above for use in a photographic art.

Thank you.

### STAFF USE ONLY

Searcher: EL

Searcher Phone #: \_\_\_\_\_

Searcher Location: \_\_\_\_\_

Date Searcher Picked Up: \_\_\_\_\_

Date Completed: 3-19-03

Searcher Prep & Review Time: 20

Clerical Prep Time: \_\_\_\_\_

Online Time: 115

### Type of Search

NA Sequence (#) \_\_\_\_\_

AA Sequence (#) \_\_\_\_\_

Structure (#) ✓

Bibliographic ✓

Litigation \_\_\_\_\_

Fulltext \_\_\_\_\_

Patent Family \_\_\_\_\_

Other \_\_\_\_\_

### Vendors and cost where applicable

STN \$ 290.55

Dialog (4) (subsets)

Questel/Orbit (and)

Dr. Link \_\_\_\_\_

Lexis/Nexis \_\_\_\_\_

Sequence Systems \_\_\_\_\_

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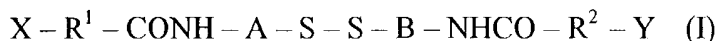
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**Claims:**

1. A photographic developer composition for use in the development of a black and white silver halide photographic element said composition comprising at least one developing agent and, in an amount sufficient to inhibit sludge deposition, one or more compounds selected from compounds having the formula



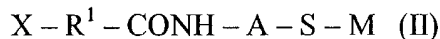
wherein

A and B are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

$R^1$  and  $R^2$  are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

X and Y are each independently a solubilising group;

and compounds having the formula



wherein A,  $R^1$  and X are as defined above, and

M is either a hydrogen atom or a cationic species if the sulfur atom is in its ionised form.

2. A composition according to claim 1 wherein A and B are selected from a substituted or unsubstituted alkylene group having from 1 to 12 carbon atoms, a cycloalkylene group having from 5 to 8 ring carbon atoms, an aromatic group having from 5 to 10 ring carbon atoms, a heterocyclic group having from 5 to 10 ring atoms, said ring atoms being selected from selected from C, N, S, and O.

3. A composition according to claim 1 wherein A and B are phenylene groups.

4. A composition according to claim 1 wherein  $R^1$  and  $R^2$  are selected from a substituted or unsubstituted alkylene group having from 1 to 12 carbon atoms, a cycloalkylene group having from 5 to 8 ring carbon atoms, an aromatic group having from 5 to 10 ring carbon atoms, a heterocyclic group having from 5 to 10 ring atoms, said ring atoms being selected from selected from C, N, S, and O.

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5. A composition according to claim 1 wherein  $R^1$  and  $R^2$  represent  $-(CH_2)_3-$ .
6. A composition according to claim 1 wherein the X and Y groups are selected from quaternary ammonium groups and carboxylic, sulfonic, sulfinic and phosphonic groups in acid or salt form.
7. A composition according to claim 1 wherein A and B each represent paraphenylene,  $R^1$  and  $R^2$  each represent  $-(CH_2)_3-$  and, X and Y each represent  $-COOM$  wherein M is either a hydrogen atom or a cationic species if the carboxyl group is in its ionised form.
8. A composition according to claim 1 wherein compound (I) and/or (II) is present in the developer composition in an amount sufficient to provide a concentration of from  $7 \times 10^{-6}$  to  $7 \times 10^{-3}$  mol/l of working strength developing solution.
9. A composition according to claim 1 further comprising a compound having the formula
- $$Q - S - H \quad (III)$$
- wherein Q represents a substituted or unsubstituted heterocyclic group, the silver salt of said compound being water insoluble
10. A composition according to claim 9 wherein the heterocyclic group has from 5 to 10 ring atoms selected from C, N, S, and O.
11. A composition according to claim 9 wherein the heterocyclic group is benzothiazole group.
12. A composition according to claim 9 wherein the compound of formula (III) is present in the developer composition in an amount sufficient to provide a

concentration of from  $2 \times 10^{-5}$  to  $5 \times 10^{-3}$  mol/l of working strength developing solution.

13. A composition according to claim 1 further comprising a thiol promoting compound selected from sugar derivatives, mercaptocarboxylic acids and compounds selected from those having formula (III) above whose silver salts may be water insoluble or water soluble.

14. A composition according to claim 13 wherein the compound is selected from ascorbates, isoascorbates, erythorbates, piperidine hexose reductone, mercaptosuccinic acid, cysteine and 5-mercaptobenzotriazole.

15. A composition according to claim 13 wherein the sugar derivative is present in the developer composition in an amount sufficient to provide a concentration of from  $2 \times 10^{-4}$  to  $7 \times 10^{-2}$  mol/l of working strength developing solution.

16. A composition according to claim 13 wherein the mercaptocarboxylic acid or compound selected from those having formula (III) is present in the developer composition in an amount sufficient to provide a concentration of from  $2 \times 10^{-5}$  to  $2 \times 10^{-2}$  mol/l of working strength developing solution.

17. A composition according to claim 1 wherein the developing agent is selected from dihydroxybenzene and ascorbic acid developing agents.

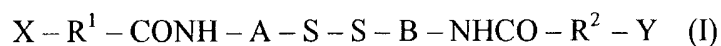
18. A composition according to claim 17 further comprising an auxiliary super-additive developing agent.

19. A composition according to claim 1 comprising a sulfite preservative.

20. A method of forming a photographic image in a black and white silver halide photographic element which comprises imagewise exposing the

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photographic element and developing the exposed element with a developer solution which is or is produced from a composition comprising at least one developing agent and, in an amount sufficient to inhibit sludge deposition, one or more compounds selected from compounds having the formula



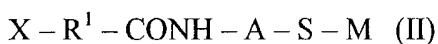
wherein

A and B are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

$R^1$  and  $R^2$  are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

X and Y are each independently a solubilising group;

and compounds having the formula

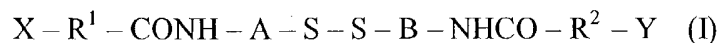


wherein A,  $R^1$  and X are as defined above, and

M is either a hydrogen atom or a cationic species if the sulfur atom is in its ionised form.

21. A method as claimed in claim 20 wherein one or more of the compounds (I) and (II) defined above are added to the developer solution from the photographic element during development.

22. A black and white silver halide photographic element comprising a support having thereon at least one light-sensitive silver halide emulsion layer said element comprising, in an amount sufficient to inhibit sludge deposition during development, one or more compounds selected from compounds having the formula

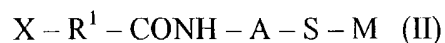


wherein

A and B are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

$R^1$  and  $R^2$  are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

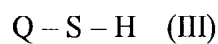
X and Y are each independently a solubilising group;  
and compounds having the formula



wherein A, R<sup>1</sup> and X are as defined above, and

M is either a hydrogen atom or a cationic species if the sulfur atom is in its ionised form.

23. A photographic element as claimed in claim 22 further comprising one or more compounds selected from a compound having the formula



wherein Q represents a substituted or unsubstituted heterocyclic group, the silver salt of said compound being water insoluble and a thiol promoting compound selected from sugar derivatives, mercaptocarboxylic acids and compounds selected from those having formula (III) above whose silver salts may be water insoluble or water soluble.

nucleator and an amino compound which functions as an incorporated booster, utilizing the improved black-and-white developing composition of this invention.

U.S. Pat. No. 4,254,215 describes a process for the prevention of darkening and the formation of a sediment in photographic developer solutions by adding a combination of a mercapto compound and a Bunte salt to the developer solution. The mercapto compound may be a thiol of the formula  $\text{HS-D-(W)}_n$  where D is a substituted or unsubstituted aliphatic, araliphatic, cycloaliphatic, aromatic or heterocyclic radical and W may be a group of the type  $-\text{CONH}_2$ .

### Problem to be solved by the Invention

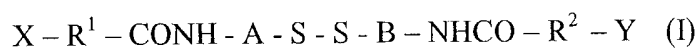
It is an aim of the invention to provide an alternative developer composition in which silver sludge formation is reduced.

It is an aim of the invention to provide a developer composition containing a silver antisludging agent in which the rate of loss of antisludging activity on dilution is decreased.

It is an aim of the invention to provide a developer composition containing a silver antisludging agent in which the loss of antisludging activity on prolonged keeping is diminished.

### Summary of the Invention

In one aspect the invention provides a photographic developer composition for use in the development of a black and white silver halide photographic element said composition comprising at least one developing agent and, in an amount sufficient to inhibit sludge deposition, one or more compounds selected from compounds having the formula

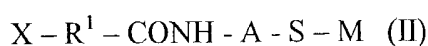


wherein

A and B are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

$\text{R}^1$  and  $\text{R}^2$  are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

X and Y are each independently a solubilising group; and compounds having the formula



wherein A, R<sup>1</sup> and X are as defined above, and  
M is either a hydrogen atom or a cationic species if the sulfur atom is in its ionised form.

In another aspect, the invention provides a method of forming a  
5 photographic image in a black and white silver halide photographic element which  
comprises imagewise exposing the photographic element and developing the  
exposed element with a developing composition comprising at least one  
developing agent and, in an amount sufficient to inhibit sludge deposition, a  
compound having the formula (I) and/or (II) as defined above.

10 In another aspect, the invention provides a black and white silver halide  
photographic element comprising a support having thereon at least one light-  
sensitive silver halide emulsion layer said element comprising, in an amount  
sufficient to inhibit sludge deposition during development, a compound having the  
formula (I) and/or (II) as defined above.

#### 15 **Advantageous Effect of the Invention**

Use of the developer composition of the invention reduces sludge  
formation.

The antisludging activity of the developer composition diminishes only  
gradually on dilution.

20 The antisludging activity loss of the developer composition on prolonged  
keeping is diminished.

#### **Brief Description of the Drawings**

Figures 1 to 3 show the concentration of various components of the  
developer compositions used in Example 2.

#### 25 **Detailed Description of the Invention**

The developing compositions of this invention are useful for forming black-and-  
white silver images by development of light-sensitive silver halide photographic  
elements of many different types, including, for example, microfilms, aerial films  
and X-ray films. They are especially useful in the field of graphic arts for forming  
30 very high contrast silver images. In the graphic arts field, they can be used with a  
wide variety of graphic arts films.



Regarding the compounds (I) and (II), A and B may be selected from a substituted or unsubstituted alkylene group having from 1 to 12, preferably from 1 to 6 carbon atoms, a cycloalkylene group having from 5 to 8, preferably from 5 to 6 ring carbon atoms, an aromatic group having from 5 to 10, preferably from 5 to 6 ring carbon atoms, (e.g. a fused aromatic group having from 9 to 10 carbon atoms), a heterocyclic group having from 5 to 10, preferably from 5 to 6 ring atoms (e.g. a fused heterocyclic group having from 9 to 10 ring atoms), said ring atoms being selected from selected from C, N, S, and O.

Particularly preferred A and B groups include phenylene.

Examples of substituents for the A and B groups include alkyl groups (e.g. methyl, ethyl, hexyl), haloalkyl groups (e.g. trifluoromethyl, trichloromethyl, tribromomethyl), alkoxy groups (e.g. methoxy, ethoxy, octyloxy), aryl groups (e.g. phenyl, naphthyl, tolyl), hydroxy groups, halogen atoms, aryloxy groups (e.g. phenyloxy, alkylthio groups (e.g. methylthio, butylthio), arylthio groups (e.g. phenylthio), acyl groups (e.g. acetyl, propionyl, butyryl, valeryl), sulfonyl groups (e.g. methylsulfonyl, phenylsulfonyl), acylamino groups, sulfonylamino groups, acyloxy groups (e.g. acetoxy, benzoxy), cyano groups, amino groups, groups represented by X and Y as defined above and groups represented by  $X - R^1 - \text{CONH} -$  and  $Y - R^2 - \text{CONH} -$  as defined above.

$R^1$  and  $R^2$  may be selected from a substituted or unsubstituted alkylene group having from 1 to 12, preferably from 1 to 6 carbon atoms, a cycloalkylene group having from 5 to 8, preferably from 5 to 6 ring carbon atoms, an aromatic group having from 5 to 10, preferably from 5 to 6 ring carbon atoms, (e.g. a fused aromatic group having from 9 to 10 carbon atoms), a heterocyclic group having from 5 to 10, preferably from 5 to 6 ring atoms (e.g. a fused heterocyclic group having from 9 to 10 ring atoms), said ring atoms being selected from selected from C, N, S, and O.

Examples of substituents for the  $R^1$  and  $R^2$  groups include alkyl groups (e.g. methyl, ethyl, hexyl), haloalkyl groups (e.g. trifluoromethyl, trichloromethyl, tribromomethyl), alkoxy groups (e.g. methoxy, ethoxy, octyloxy), aryl groups (e.g. phenyl, naphthyl, tolyl), hydroxy groups, halogen atoms, aryloxy groups (e.g. phenyloxy, alkylthio groups (e.g. methylthio, butylthio), arylthio groups (e.g.

phenylthio), acyl groups (e.g. acetyl, propionyl, butyryl, valeryl), sulfonyl groups (e.g. methylsulfonyl, phenylsulfonyl), acylamino groups, sulfonylamino groups, acyloxy groups (e.g. acetoxy, benzoxy), cyano groups, amino groups and groups represented by X and Y.

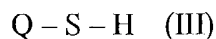
5            Particularly preferred  $R^1$  and  $R^2$  groups include  $-(CH_2)_{2-4}-$ , especially  $-(CH_2)_3-$ .

Suitable X and Y groups are those which enhance the solubility of the compound when the developer composition is in solution form. Preferred groups are water solubilising groups including quaternary ammonium groups and  
10    carboxylic, sulfonic, sulfinic and phosphonic groups in acid or salt form e.g. COOM wherein M is either a hydrogen atom or a cationic species if the carboxyl group is in its ionised form. The cationic species may be a metal ion or an organic ion. Examples of organic cations include ammonium ions (e.g. ammonium, tetramethylammonium, tetrabutylammonium), phosphonium ions (e.g.  
15    tetraphenylphosphonium), and guanidyl groups. Preferably, M is hydrogen or an alkali metal cation, with a sodium or potassium ion being most preferred. The developer solution may comprise a proportion of non-aqueous solvent e.g. diethylene glycol. Marginal water soluble groups may then be chosen. Examples of such groups include acyloxy, alkoxy and aryloxy groups.

20            In a particularly preferred embodiment of the invention, the antisludging agent comprises para-glutaramidophenyldisulfide (the compound of formula (I) wherein A and B each represent paraphenylene,  $R^1$  and  $R^2$  each represent  $-(CH_2)_3-$  and, X and Y each represent  $-COOM$  wherein M is either a hydrogen atom or a cationic species if the carboxyl group is in its ionised form).

25    The antisludging agent may be present in the developer composition in an amount sufficient to provide a concentration of from  $7 \times 10^{-6}$  to  $7 \times 10^{-3}$  mol/l, preferably from  $3.5 \times 10^{-5}$  to  $3.5 \times 10^{-3}$  mol/l, and most preferably from  $7 \times 10^{-5}$  to  $2 \times 10^{-3}$  mol/l of working strength developing solution.

30            The developer composition may further comprise a compound having the formula



**Table 1B:** Experimental details.

	Expt. No.	Invention Component	Invention Component Addition(moles x 10 <sup>-3</sup> /l in concentrate)	ReplenishmentRate(mls/m <sup>2</sup> )	DevelopmentTime(sec.)
5					
	1	None	---	400	30
	2	None	---	400	30
10	3	GDPD	0.19	400	30
	4	GDPD	0.39	400	30
	5	GDPD	1.92	400	30
	6	None	---	150	30
	7	GDPD	0.39	150	30
15	8	GDPD	1.92	150	30
	9	MTA	4.18	150	30
	10	PDPD	1.58	150	20

GDPD represents p-glutaramidophenyldisulfide, disodium salt

20 MTA represents the compound of formula (II) wherein A is paraphenylene, R<sup>1</sup> is -(CH<sub>2</sub>)<sub>3</sub>-, and X is -COOH.

PDPD represents the compound of formula (I) wherein A and B are each paraphenylene, R<sup>1</sup> and R<sup>2</sup> are each orthophenylene, and X and Y are each SO<sub>3</sub>K<sup>+</sup>.

Table 2A

	Disulphide Invention Component	Disulphide Invention Component Addition(moles x 10 <sup>-3</sup> /l in concentrate)	Thiol Protecting Component	Thiol Protecting Component Addition(moles x 10 <sup>-3</sup> /l in concentrate)	Thiol (moles x 10 <sup>-3</sup> /l in concentrate)
5					
10	GDPDA	6.30	---	---	2.22
	GDPDA	6.30	MSA	1.00	2.68
	GDPDA	6.30	MSA	3.00	3.43
	GDPDA	6.30	MSA	9.00	>4.18
	GDPDA	2.10	---	---	0.79
15	GDPDA	2.10	MSA	1.00	1.09
	GDPDA	2.10	MSA	3.00	1.61
	GDPDA	2.10	MSA	9.00	1.63
	GDPDA	2.10	Cysteine	1.24	0.92
	GDPDA	2.10	Cysteine	4.13	1.46
20	GDPDA	2.10	Cysteine	8.26	1.44
	GDPDA	1.58	Cysteine	1.24	0.80

GDPDA represents p-glutaramidophenyldisulfide acid

MSA represents mercaptosuccinic acid

25 In Figures 1 to 3 the results of an accelerated keeping experiment (21 days at 60C) are shown for aliquots of a developer formulation according to Table 1A with and without the presence of a thiol-promoting compound. The analytical technique used was LCMS (liquid chromatography mass spectrometry).

30 Figure 1 represents the results obtained without a thiol promoting compound.

Figure 2 represents the results obtained when the developer composition contained  $9 \times 10^{-2}$  moles/l of sodium erythorbate.



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Bib Data Sheet

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Nicholas A. Pightling, Ruislip Manor, UNITED KINGDOM;

**\*\* CONTINUING DATA \*\*\*\*\***

**\*\* FOREIGN APPLICATIONS \*\*\*\*\***  
UNITED KINGDOM 0103527.8 02/13/2001

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**\*\* 02/15/2002**

Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no	STATE OR COUNTRY UNITED KINGDOM	SHEETS DRAWING 2	TOTAL CLAIMS 23	INDEPENDENT CLAIMS 3
35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance				
Verified and Acknowledged Examiner's Signature _____ Initials _____				

**ADDRESS**  
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14650-2201

**TITLE**  
Photographic developing composition and use thereof in the development of a photographic element

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L1 FILE 'LREGISTRY' ENTERED AT 11:43:15 ON 19 MAR 2003  
STR

L2 FILE 'REGISTRY' ENTERED AT 11:51:05 ON 19 MAR 2003  
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L5 STR  
L6 28 S (L1 NOT L4) AND L2  
L7 STR L1  
L8 1 S (L6 NOT L4) AND L2  
L9 SCR 1771 OR 1816  
L10 45 S (L6 NOT L4) AND L2 AND L8  
L11 STR L6  
L12 45 S (L10 NOT L4) AND L2 AND L8  
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L17 116 S ((SILVER# OR AG) (W) (HALIDE# OR MONOHALIDE# OR DIHALIDE#  
L18 113 S (AGX OR AGX2 OR AGF OR AGF2 OR AGCL OR AGCL2 OR AGBR OR  
L19 720 S PHOTOG? OR IMAGE# OR IMAGING# OR PHOTOIMAG? OR REPROG?  
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L23 38394 S L12  
L24 32264 S L15  
L25 58 S L23 AND L21  
23 S L24 AND (L18 OR L19)

L26 129 S L22 AND L21  
 L27 88 S L26 AND (L18 OR L19)  
 L28 83 S L27 AND 1907-2001/PY  
 L29 80 S L28 AND P/DT  
 L30 QUE DEVELOP?  
 L31 41 S L29 AND L30

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 E BENZOTHAZOLE/CN

L32 1 S E3  
 L33 269 S 333.521.14/RID

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L34 85687 S L33

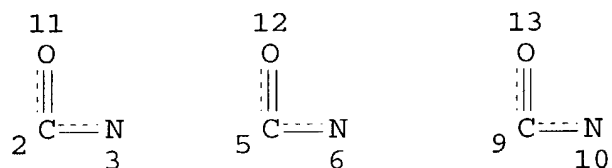
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L35 48047 S L34 OR ?BENZOTHAZOL?  
 L36 19 S L29 AND L35  
 L37 35863 S B(A)W OR BLACK?(2A)WHITE? OR MONOCHROM?  
 L38 2 S L29 AND L37  
 L39 3 S L22 AND L21 AND (L18 OR L19) AND L37  
 L40 3 S L38 OR L39  
 L41 22 S L25 NOT L40  
 L42 10 S L36 NOT (L40 OR L41)  
 L43 8 S L36 AND L41  
 L44 22 S L41 OR L43  
 L45 26 S L31 NOT (L40 OR L44 OR L42)

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L2 SCR 1267  
 L4 STR



NODE ATTRIBUTES:

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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

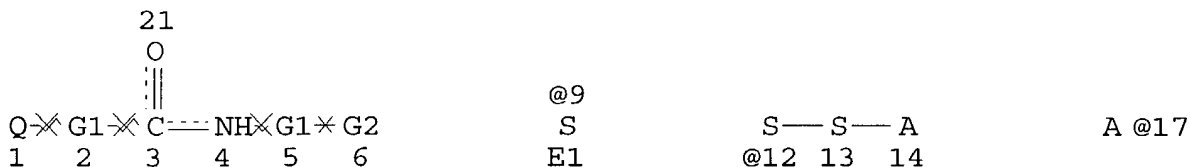
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE

L8 SCR 1771 OR 1816

L10 STR



REP G1=(1-10) 17

VAR G2=9/12

NODE ATTRIBUTES:

HCOUNT IS E1 AT 9  
 NSPEC IS RC AT 1  
 NSPEC IS RC AT 14  
 NSPEC IS RC AT 17  
 CONNECT IS E1 RC AT 9  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

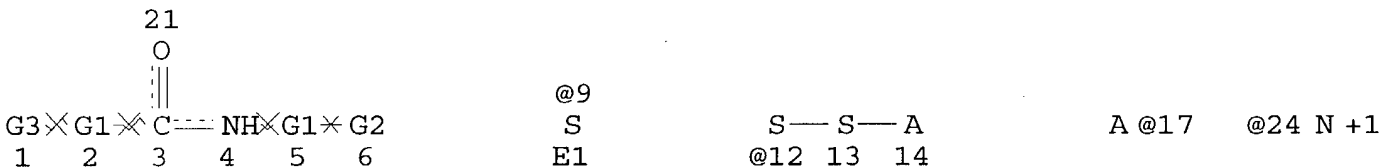
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L12 5883 SEA FILE=REGISTRY SSS FUL (L10 NOT L4) AND L2 AND L8

L13 STR



REP G1=(1-10) 17

VAR G2=9/12

VAR G3=24/COOH/SO3H/OSO3H/PO3H2/OPO3H2

NODE ATTRIBUTES:

CHARGE IS E+1 AT 24  
 HCOUNT IS E1 AT 9  
 NSPEC IS RC AT 14  
 NSPEC IS RC AT 17  
 NSPEC IS RC AT 24  
 CONNECT IS E1 RC AT 9  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L15 1080 SEA FILE=REGISTRY SUB=L12 SSS FUL L13



100.0% PROCESSED 5407 ITERATIONS ( 7 INCOMPLETE) 1080 ANSWERS  
SEARCH TIME: 00.00.03

=> file hca

FILE 'HCA' ENTERED AT 13:01:21 ON 19 MAR 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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=> d l40 1-3 cbib abs hitstr hitind

L40 ANSWER 1 OF 3 HCA COPYRIGHT 2003 ACS

137:177051 **Photographic** developing composition to inhibit  
sludge deposition. Magee, P. M.; Parker, B. J.; Pightling, N. A.  
(Eastman Kodak Company, USA). Eur. Pat. Appl. EP 1231504 A2  
20020814, 19 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR,  
GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY,  
AL, TR. (English). CODEN: EPXXDW. APPLICATION: EP 2002-75531  
20020208. PRIORITY: GB 2001-3527 20010213.

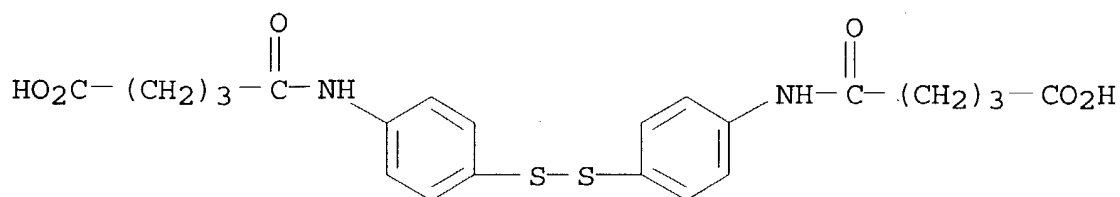
AB Disclosed is a **photog.** developer compn. for use in the  
development of a **black and white silver**  
**halide photog.** film that comprises at least one  
developing agent and, in an amt. sufficient to inhibit sludge  
deposition, one or more compds. selected from compds. having the  
formula X-R1-CONH-A-S-S-B-NHCO-R2-Y (A, B = aliph., alicyclic,  
arom., heterocyclic; R1, R2 = aliph., alicyclic, arom.,  
heterocyclic; X, Y = solubilizing group); and compds. having the  
formula X-R1-CONH-A-S-M (A, R1, X are as defined above; M = H, or  
cationic species if the sulfur atom is in its ionized form). Use of  
the developer compn. of the invention reduces sludge formation.

IT 165116-10-9 208471-42-5 440670-19-9  
446265-30-1

(**photog.** developing compn. to inhibit sludge  
deposition)

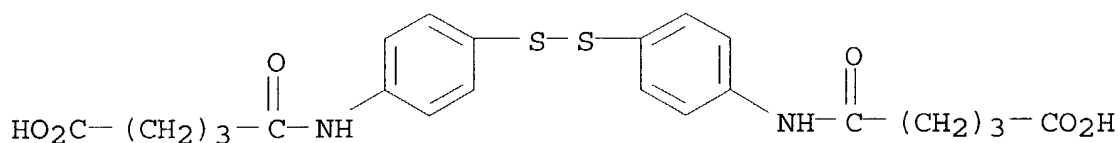
RN 165116-10-9 HCA

CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-,  
disodium salt (9CI) (CA INDEX NAME)

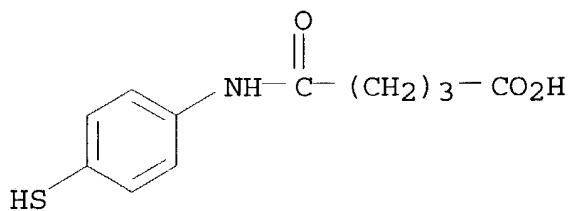


● 2 Na

RN 208471-42-5 HCA

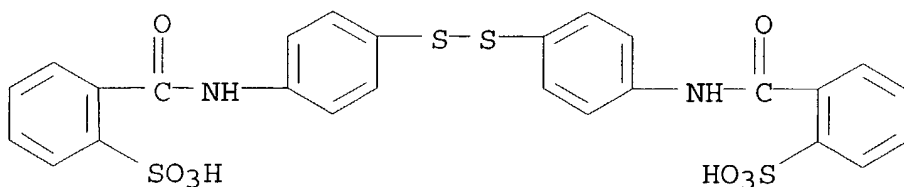
CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo- (9CI)  
(CA INDEX NAME)

RN 440670-19-9 HCA

CN Pentanoic acid, 5-[(4-mercaptophenyl)amino]-5-oxo- (9CI) (CA INDEX  
NAME)

RN 446265-30-1 HCA

CN Benzenesulfonic acid, 2,2'-[dithiobis(4,1-phenyleneiminocarbonyl)]bis-, dipotassium salt (9CI) (CA INDEX  
NAME)



● 2 K

IC ICM G03C005-30  
 CC 74-2 (Radiation Chemistry, Photochemistry, and  
 Photographic and Other Reprographic Processes)  
 ST **photog** developing compn sludge inhibition film  
 IT **Photographic** developers  
 (photog. developing compn. to inhibit sludge  
 deposition)  
 IT 70-49-5, Mercaptosuccinic acid 17697-83-5, 2-  
 Mercaptobenzothiazole, silver salt 165116-10-9  
 208471-42-5 440670-19-9 446265-30-1  
 (photog. developing compn. to inhibit sludge  
 deposition)

L40 ANSWER 2 OF 3 HCA COPYRIGHT 2003 ACS

126:110956 **Black-and-white silver**

**halide photographic** material containing redox  
 compound capable of releasing development-inhibitor-releasing  
 substance and its processing. Sanpei, Takeshi (Konishiroku Photo  
 Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08240876 A2 19960917  
 Heisei, 123 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
 1995-337002 19951225. PRIORITY: JP 1994-323065 19941226.

AB In the **black-and-white silver**

**halide photog.** material contg. a certain concn. of  
 a hydrazine deriv. in **Ag halide** emulsion layers  
 and their adjacent layers on one side of a support, (1) the  
**photog.** material is virtually free of a dihydroxybenzene  
 compd., (2) the **photog.** material is developed by a soln.  
 contg.  $R_1CH(OH)C(=O)(X)kR_2$  ( $R_{1,2}$  = alkyl, amino, alkoxy, alkylthio;  
 $k = 0, 1$ ; when  $k = 1$ ,  $X = CO, CS$ ) or  $R_1C(OM_1)=C(OM_2)(X)kR_2$  ( $M_{1,2}$  =  
 alkali metal), and (3) .gtoreq.1 **Ag halide**  
 emulsion layer contains .gtoreq.1 redox compd. capable of releasing  
 a DIR substance upon oxidn. The process uses a developer which  
 contains a transition metal complex salt-based developing agent but  
 is virtually free of a dihydroxybenzene compd. The **photog**  
 . material exhibited little black dots and little fluctuation in  
 sensitivity and gradation.

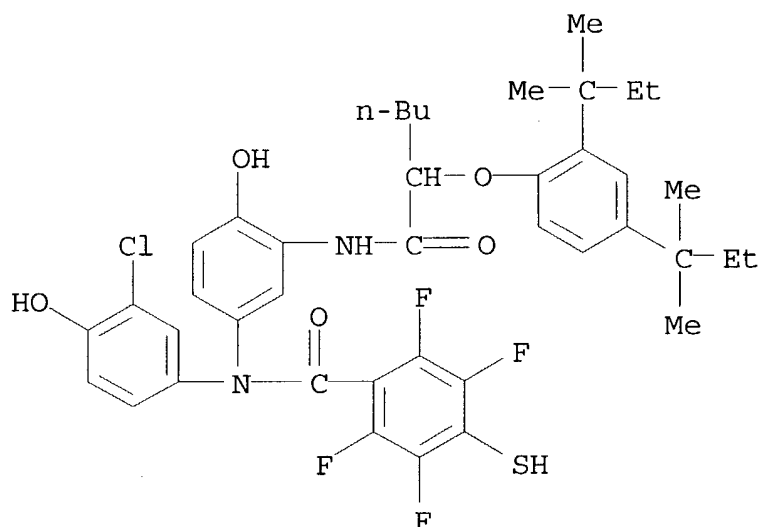
IT 182560-40-3

(black-and-white silver  
**halide photog.** material contg. redox compd.)

capable of releasing development-inhibitor-releasing substance and its processing)

RN 182560-40-3 HCA

CN Benzamide, N-[3-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]-4-hydroxyphenyl]-N-(3-chloro-4-hydroxyphenyl)-2,3,5,6-tetrafluoro-4-mercapto- (9CI) (CA INDEX NAME)



IC ICM G03C001-06

ICS G03C001-04; G03C001-295; G03C001-43; G03C001-83; G03C005-26; G03C005-29; G03C005-30; G03C005-305; G03C005-31

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST back and white **photog** material processing; development inhibitor releasing substance **photog** emulsion; DIR releasing redox compd **photog** emulsion

IT **Photographic** developers

**Photographic** development

**Photographic** emulsions

(**black-and-white silver**

**halide photog.** material contg. redox compd.

capable of releasing development-inhibitor-releasing substance and its processing)

IT **Photographic** couplers

(development-inhibitor-releasing; **black-and-white silver halide photog.**

material contg. redox compd. capable of releasing development-inhibitor-releasing substance and its processing)

IT 50-81-7, L-Ascorbic acid, uses 136-85-6, 5-Methylbenzotriazole 2010-19-7 5401-94-5, 5-Nitroindazole 23249-95-8 51588-85-3

81362-14-3 132184-77-1 138981-32-5 **182560-40-3**

185804-99-3 185805-00-9 185805-01-0 185805-02-1 185805-03-2

185805-07-6 185805-08-7 185805-09-8 185805-10-1 185805-11-2

185805-12-3 185805-13-4 185805-14-5 185805-15-6 185805-16-7

(**black-and-white silver**

**halide photog.** material contg. redox compd.

capable of releasing development-inhibitor-releasing substance and its processing)

IT 76774-24-8, Acrylic acid- sodium acrylate- ethylene glycol dimethacrylate copolymer 113723-38-9 177097-70-0 185805-04-3 185805-05-4 185805-06-5

(**black-and-white silver**

**halide photog.** material contg. redox compd.

capable of releasing development-inhibitor-releasing substance and its processing)

IT 6783-74-0, 9H-Thioxanthen-9-ol 108732-94-1 174863-21-9 178449-83-7 184888-80-0 185614-18-0

(nucleation promoting agent; **black-and-white**

**silver halide photog.** material contg.

redox compd. capable of releasing development-inhibitor-releasing substance and its processing)

L40 ANSWER 3 OF 3 HCA COPYRIGHT 2003 ACS

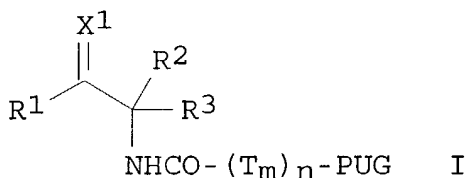
125:312336 Ultra high-contrast **black-and-white**

**silver halide photographic** material, its

manufacture and **image** formation using same. Yamada, Taketoshi; Miura, Akio; Komamura, Tawara (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08201957 A2 **19960809**

Heisei, 37 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-8210 19950123.

GI



AB In the title **photog.** material having .gtoreq.1 hydrophilic colloid layer and .gtoreq.1 **Ag halide** emulsion layer, the hydrophilic colloid layer contains a compd. capable of releasing a compd. useful for **photog.** on being oxidized. A group specified compds. contained in the hydrophilic colloid layer is claimed, e.g. I ( R1 = alkyl, aryl, heterocyclyl; R2, R3 = H, acyl, carbamoyl, cyano, nitro, sulfonyl, aryl, oxalyl, heterocyclyl, alkoxy carbonyl, aryloxy carbonyl; X1 = O, NH, Tm = timing group, n = 0, 1; PUG = development suppressing agent). 11 Modifications of the **photog.** material including the specified compds. group and **image** formation including developing at pH .ltoreq.11 are also claimed.

IT **182926-61-0**

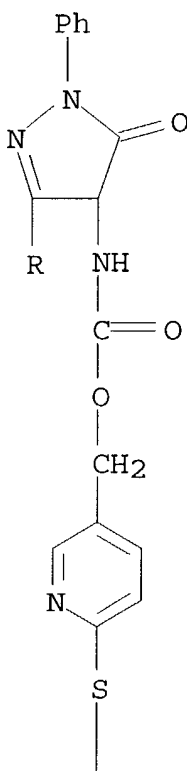
(development suppressing agent for ultra high-contrast

black-and-white photog. material)

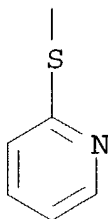
RN 182926-61-0 HCA

CN Carbamic acid, [3-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-3-methyl-1-oxobutyl]amino]-4,5-dihydro-5-oxo-1-phenyl-1H-pyrazol-4-yl]-, [6-(2-pyridinyldithio)-3-pyridinyl]methyl ester (9CI) (CA INDEX NAME)

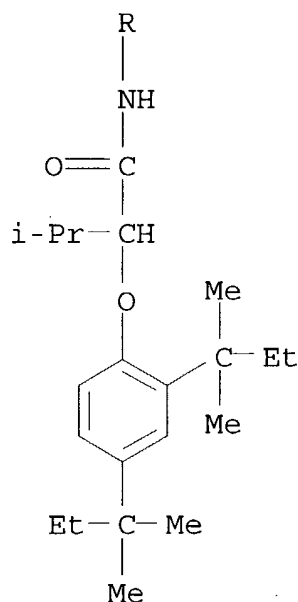
PAGE 1-A



PAGE 2-A



PAGE 3-A



IC ICM G03C001-43  
 ICS G03C001-035; G03C001-06; G03C001-30; G03C001-74; G03C005-29  
 CC **74-2** (Radiation Chemistry, Photochemistry, and  
 Photographic and Other Reprographic Processes)  
 ST **photog** material hardener **image** formation  
 IT **Photographic** films  
 (contg. specified **Ag halide** grains and  
 hardener compd.)  
 IT **Photographic** processing  
 (development at pH .ltoreq.11 for high-contrast **image**)  
 IT 111335-75-2 144232-29-1 177097-65-3 177097-72-2 177097-78-8  
 182560-30-1 182560-35-6 182926-56-3 182926-57-4  
**182926-61-0** 182926-62-1 182926-63-2 182926-64-3  
 182926-65-4 182926-68-7 182926-72-3 182926-75-6 182926-76-7  
 182926-79-0 182926-80-3 182926-82-5 182926-85-8  
 (development suppressing agent for ultra high-contrast  
**black-and-white photog.** material)  
 IT 16357-59-8 57845-28-0 59457-34-0 63684-49-1 70443-75-3  
 115007-14-2 119004-23-8 128188-10-3 139486-50-3 161032-18-4  
 (hardener for ultra high-contrast **black-and-**  
**white photog.** material)

=> d 144 1-22 cbib abs hitstr hitind

L44 ANSWER 1 OF 22 HCA COPYRIGHT 2003 ACS  
 135:129504 Process for the preparation of high chloride emulsions  
 containing iodide. Mehta, Rajesh V.; Budz, Jerzy A.; Hendricks,  
 Jess B., III; Stapelfeldt, Heinz E.; Jagannathan, Seshadri;

Jagannathan, Ramesh (Eastman Kodak Company, USA). U.S. US 6265145 B1 20010724, 15 pp., Cont.-in-part of U.S. 6,048,683. (English). CODEN: USXXAM. APPLICATION: US 1999-475405 19991230. PRIORITY: US 1998-218683 19981222.

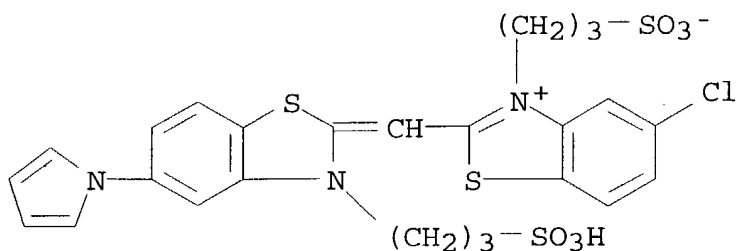
AB The invention is directed to the prepn. of radiation-sensitive silver iodochloride emulsions useful in **photog.** including electronic printing methods where information is recorded in a pixel-by-pixel mode in a radiation-sensitive **silver halide** emulsion layer. A process for the prepn. of a radiation-sensitive **Ag halide** emulsion comprised of high chloride cubical **Ag halide** grains contg. from 0.05 to 3 mol% iodide, based on total Ag, where the iodide is incorporated in the grains in a controlled, nonuniform distribution forming a core contg. at least 50% of total Ag, an iodide free surface shell having a thickness of  $>50 \text{ .ANG.}$ , and a sub-surface shell that contains a max. iodide concn. is disclosed, the process comprising: (a) providing in a stirred reaction vessel a dispersing medium and host high chloride **Ag halide** cubical grains comprising a speed enhancing amt. of iodide, and (b) pptg. **Ag halide** onto the host grains by introducing at least a Ag salt soln. into the dispersing medium at a rate such that the normalized molar addn. rate,  $R_n$ , is  $>3.0 \text{ .times. } 10^{-2} \text{ min}^{-1}$ ,  $R_n$  satisfying the formula:  $R_n = [Q_f \text{ .times. } C_f] / M$  where  $Q_f$  is the volumetric rate of addn., in L/min, of Ag salt soln. into the reaction vessel;  $C_f$  is the concn., in moles/L, of the Ag salt soln.; and  $M$  is total moles of **Ag halide** in the host grains in the reaction vessel at the precise moment of addn. of the Ag salt soln. In a further aspect, this invention is directed towards a **photog.** recording element comprising a support and  $>0.1$  light sensitive **Ag halide** emulsion layer comprising **Ag halide** grains prepd. as described above. The advantages of the invention are generally accomplished in accordance with the discovery that when the exterior portion of profiled Ag iodochloride grains are grown under specific conditions of high molar addn. rates, iodochloride emulsions of enhanced sensitivity and **photog.** curve shape are produced, as speed can be increased while keeping fog to a low level.

IT 161710-68-5P 208471-42-5P  
(prepn. of high **silver chloride** emulsions  
contg. iodide using)

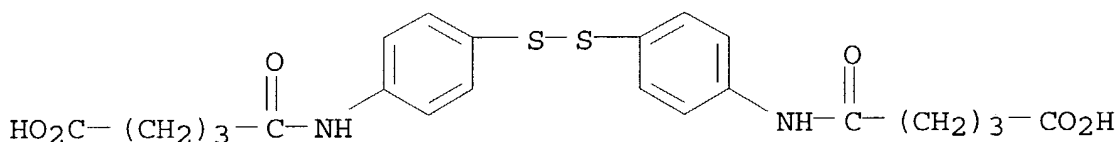
RN 161710-68-5 HCA

CN Benzothiazolium, 5-chloro-2-[[5-(1H-pyrrol-1-yl)-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)





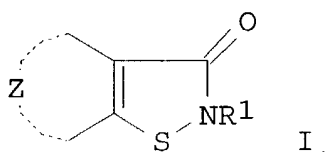
RN 208471-42-5 HCA  
 CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo- (9CI)  
 (CA INDEX NAME)



IC ICM G03C001-005  
 ICS G03C001-035  
 NCL 430569000  
 CC 74-2 (Radiation Chemistry, Photochemistry, and  
 Photographic and Other Reprographic Processes)  
 IT **Photographic** emulsions  
 (prepn. of high **silver chloride** emulsions  
 contg. iodide using)  
 IT 5244-34-8P, 1,8-Dihydroxy-3,6-dithiaoctane 14070-48-5P,  
 1-(3-Acetamidophenyl)-5-mercaptotetrazole 16920-56-2P  
 20792-40-9P 22615-69-6P **161710-68-5P** 168689-49-4P  
 172871-88-4P **208471-42-5P** 350990-73-7P, Lippmann bromide  
 (prepn. of high **silver chloride** emulsions  
 contg. iodide using)

L44 ANSWER 2 OF 22 HCA COPYRIGHT 2003 ACS  
 134:259159 Method of suppressing fog using isothiazolinone compounds in  
**silver halide** emulsions. Eikenberry, Jon N.;  
 Harbison, Kenneth G. (Eastman Kodak Company, USA). U.S. US 6214529  
 B1 **20010410**, 11 pp., Cont.-in-part of U.S. Ser. No.  
 177,220, abandoned. (English). CODEN: USXXAM. APPLICATION: US  
 1999-416822 19991012. PRIORITY: US 1998-177220 19981022.

GI



AB The invention relates to the use of isothiazolinone compds. with light-sensitive **silver halide** emulsions. This invention relates to a method of reducing fog in a **Ag halide** emulsion comprising taking a high fogging emulsion which was chem. sensitized and cooled, holding the high fogging emulsion as a melt in prepn. for coating on a support, and prior to or during the holding, contacting the emulsion with an isothiazoline compd. represented by (I), where R1 is a substituent; and Z contains the C atoms necessary to form a nonarom. ring. It also relates to **Ag halide photog.** elements contg. such emulsions.

IT 55425-23-5 155621-18-4

(method of suppressing fog using isothiazolinone compds. in **silver halide** emulsions contg. antifoggant)

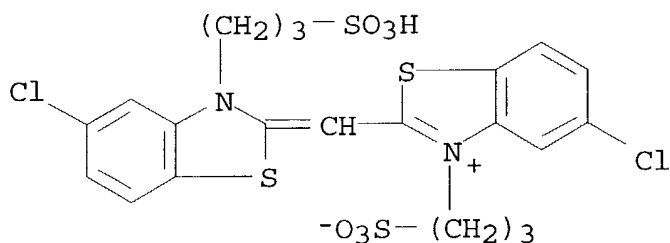
RN 55425-23-5 HCA

CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 55425-22-4

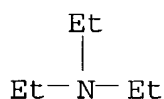
CMF C21 H20 Cl2 N2 O6 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



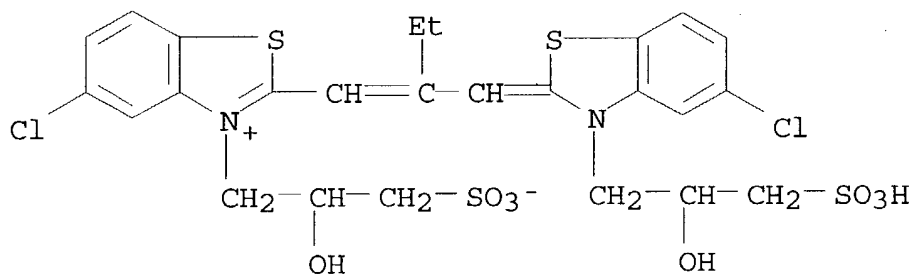
RN 155621-18-4 HCA

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(2-hydroxy-3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-3-(2-hydroxy-3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 155621-17-3

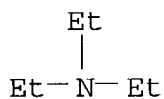
CMF C25 H26 Cl2 N2 O8 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



IT 130017-19-5

(method of suppressing fog using isothiazolinone compds. in **silver halide** emulsions contg. gold sensitizer)

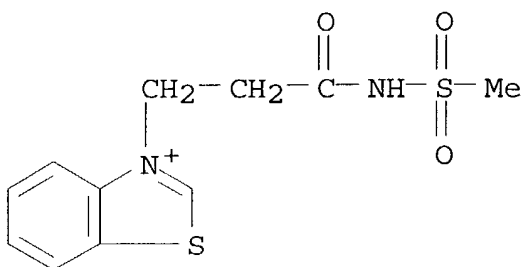
RN 130017-19-5 HCA

CN Benzothiazolium, 3-[3-[(methylsulfonyl)amino]-3-oxopropyl]-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 130017-18-4

CMF C11 H13 N2 O3 S2

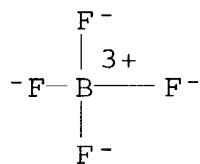


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



IT 27268-50-4

(method of suppressing fog using isothiazolinone compds. in  
**silver halide** emulsions contg. spectral  
 sensitizing dye)

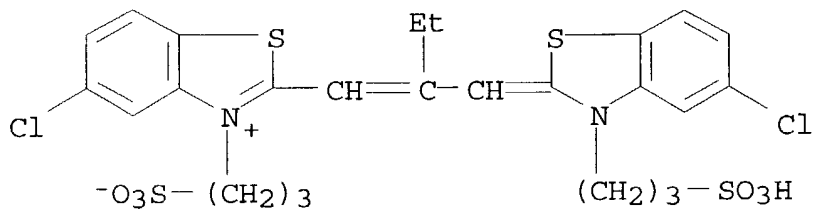
RN 27268-50-4 HCA

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-  
 benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner  
 salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

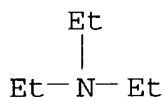
CRN 23568-98-1

CMF C25 H26 Cl2 N2 O6 S4

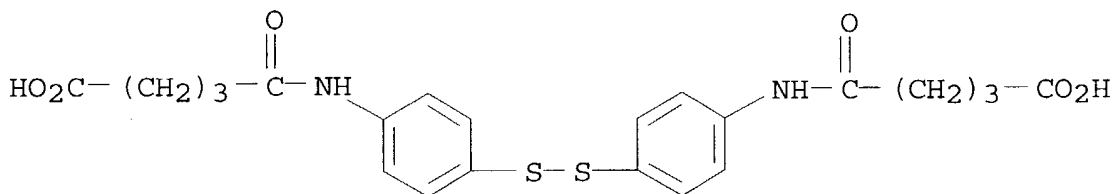


CM 2

CRN 121-44-8  
CMF C6 H15 N



IT 165116-10-9  
(method of suppressing fog using isothiazolinone compds. in  
**silver halide** emulsions contg. sulfur  
sensitizer)  
RN 165116-10-9 HCA  
CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-,  
disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C005-18  
ICS G03C005-26  
NCL 430449000  
CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)  
IT **Photographic** emulsions  
**Photographic** fog inhibitors  
(method of suppressing fog using isothiazolinone compds. in  
**silver halide** emulsions contg. sulfur  
sensitizer)  
IT 2503-56-2 55425-23-5 155621-18-4 160681-94-7  
(method of suppressing fog using isothiazolinone compds. in  
**silver halide** emulsions contg. antifoggant)  
IT 130017-19-5  
(method of suppressing fog using isothiazolinone compds. in  
**silver halide** emulsions contg. gold sensitizer)  
IT 27268-50-4 219117-64-3  
(method of suppressing fog using isothiazolinone compds. in  
**silver halide** emulsions contg. spectral  
sensitizing dye)  
IT 2682-20-4D, chloro derivs. 15283-45-1 82633-79-2 142056-80-2  
165116-10-9 329182-19-6

(method of suppressing fog using isothiazolinone compds. in **silver halide** emulsions contg. sulfur sensitizer)

L44 ANSWER 3 OF 22 HCA COPYRIGHT 2003 ACS

133:342409 **Photographic** element comprising a mixture of sensitizing dyes. Klingman, Karen J.; Kahn, Bruce E.; Parton, Richard L.; Dobles, Thomas R.; Stegman, David A.; Smith, Teresa A.; Lewis, John D. (Eastman Kodak Company, USA). U.S. US 6140035 A 20001031, 22 pp. (English). CODEN: USXXAM. APPLICATION: US 1998-151123 19980910.

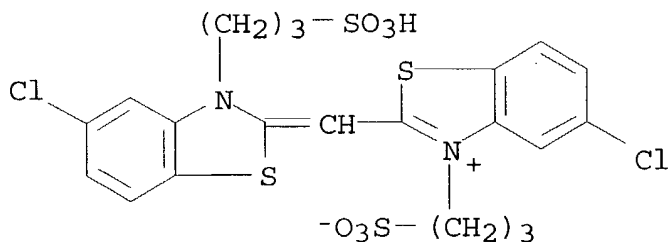
AB A **photog.** element comprises at least one **silver halide** emulsion layer in which: the **silver halide** has been spectrally sensitized with a first blue sensitizing dye having a  $\lambda_1$  less than or equal to about 475 nm and a second blue sensitizing dye having a  $\lambda_2$ , wherein the following relationship is met:  $0.12(\text{eV}) \cdot \lambda_2 \geq 1.25(\text{nm})(\text{eV}) \times 10^3 (1/\lambda_2 - 1/\lambda_1)$  ( $\lambda_1$  is the wavelength in nanometers (nm) of max. absorption of a **silver halide** emulsion sensitized with the first dye and  $\lambda_2$  is the wavelength of max. absorption of a **silver halide** emulsion sensitized with the second dye, with the proviso that neither the first nor the second dye contains selenium). The **silver halide** emulsion of said layer is chem. sensitized with a gold(I) compd. and preferably with the combination of a gold compd. and a disulfide compd.; and the **silver halide** has been chem. sensitized with a gold compd. of formula  $\text{AuL}_2\text{X}^-$  or  $\text{AuL}(\text{L}_1)\text{X}^-$  (L is a mesoionic compd.; X is an anion;  $\text{L}_1$  is a Lewis donor ligand).

IT 55425-22-4 159632-55-0 161710-68-5  
169324-94-1 220939-85-5 220939-86-6  
220939-87-7 304464-99-1

(**photog.** element comprising mixt. of sensitizing dyes)

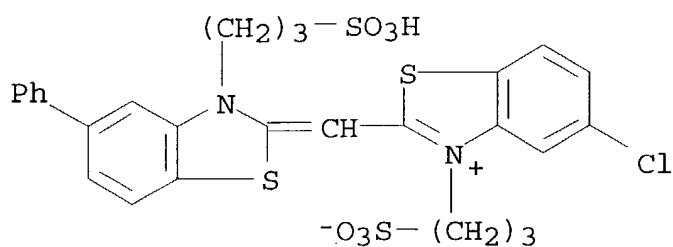
RN 55425-22-4 HCA

CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI)  
(CA INDEX NAME)



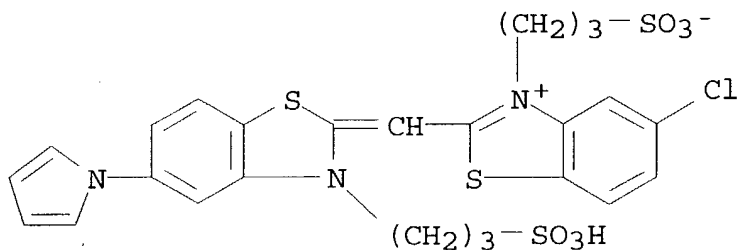
RN 159632-55-0 HCA

CN Benzothiazolium, 5-chloro-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI)  
(CA INDEX NAME)



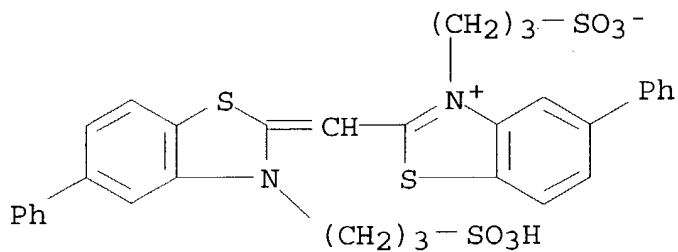
RN 161710-68-5 HCA

CN Benzothiazolium, 5-chloro-2-[[5-(1H-pyrrol-1-yl)-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



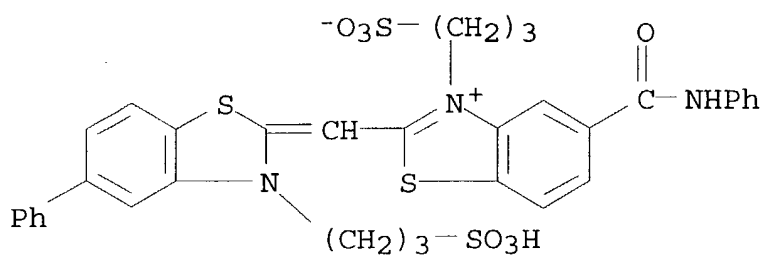
RN 169324-94-1 HCA

CN Benzothiazolium, 5-phenyl-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



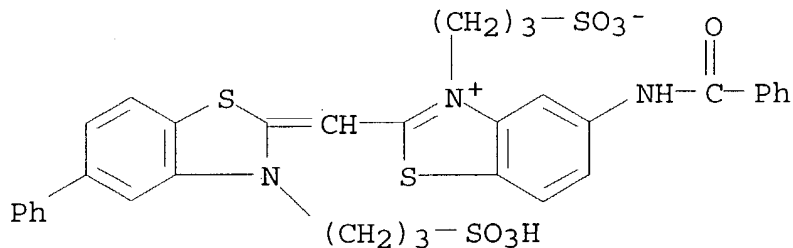
RN 220939-85-5 HCA

CN Benzothiazolium, 5-[(phenylamino)carbonyl]-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



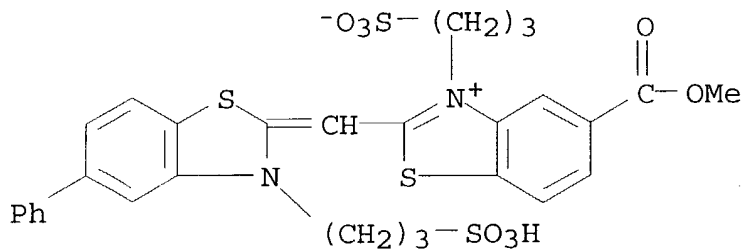
RN 220939-86-6 HCA

CN Benzothiazolium, 5-(benzoylamino)-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 220939-87-7 HCA

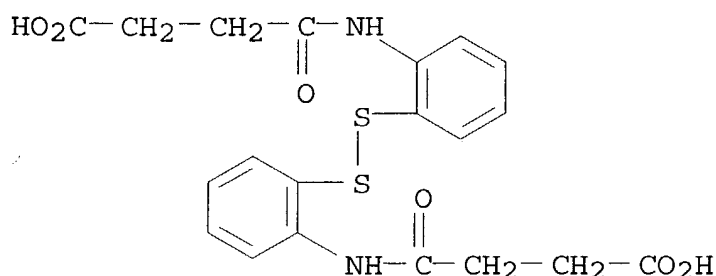
CN Benzothiazolium, 5-(methoxycarbonyl)-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 304464-99-1 HCA

CN Butanoic acid, 4,4'-[dithiobis(2,1-phenyleneimino)]bis[4-oxo- (9CI) (CA INDEX NAME)





IC ICM G03C001-09  
ICS G03C001-16; G03C001-29  
NCL 430574000  
CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)  
ST **photog** material **silver halide** emulsion  
photosensitizing cyanine dye; gold compd photosensitizer disulfide  
IT Cyanine dyes  
Photographic emulsions  
Photosensitizers (pharmaceutical)  
(**photog.** element comprising mixt. of sensitizing dyes)  
IT Disulfides  
Silver halides  
(**photog.** element comprising mixt. of sensitizing dyes)  
IT Dyes  
(photosensitizing; **photog.** element comprising mixt. of  
sensitizing dyes)  
IT 5244-34-8 55425-22-4 138450-95-0 141766-84-9  
159632-55-0 161710-68-5 161710-76-5  
169324-94-1 174079-63-1 177951-67-6 220939-85-5  
220939-86-6 220939-87-7 220939-91-3  
220939-92-4 304464-99-1 304465-50-7  
(**photog.** element comprising mixt. of sensitizing dyes)  
L44 ANSWER 4 OF 22 HCA COPYRIGHT 2003 ACS  
131:329804 Novel methine compounds and **silver halide**  
**photographic** material containing same. Kato, Takashi (Fuji  
Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 11305375 A2  
19991105 Heisei, 15 pp. (Japanese). CODEN: JKXXAF. APPLICATION:  
JP 1998-117453 19980427.  
GI For diagram(s), see printed CA Issue.  
AB Novel methine compds. having thiol group are claimed, which are  
useful as sensitizing dyes for **Ag halide**  
**photog.** materials. The compds. may have the general formula  
I [Z = 5- or 6-membered N-contg. heterocycle which may be condensed  
with other ring; A = divalent linking group; R1, R2 = alkyl, aryl,  
heterocyclic group; L1-4 = (substituted) methine; n = 0-4; p = 0 or  
1; M = charge-neutralizing ion; m = no. required to neutralize the  
charge]. A **Ag halide photog.** material  
contg. the compd. is also claimed. The compd. is well adsorbed on

**Ag halide** grains and the the **photog.**  
material exhibits high sensitivity.

IT **248605-45-0P**

(hemicyanine dye with thiol group for **photog.**  
sensitizer)

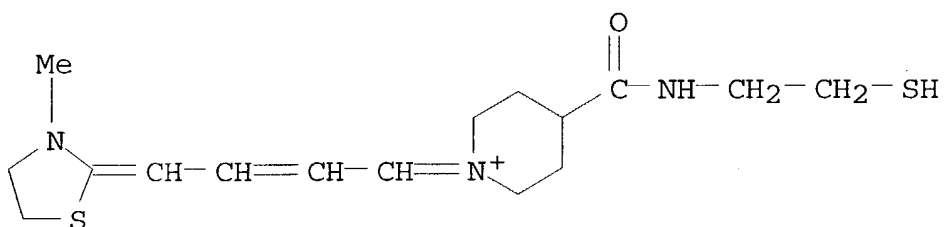
RN 248605-45-0 HCA

CN Piperidinium, 4-[[[(2-mercaptoethyl)amino]carbonyl]-1-[4-(3-methyl-2-thiazolidinylidene)-2-butenylidene]-, perchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 249938-93-0

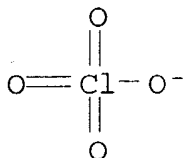
CMF C16 H26 N3 O S2



CM 2

CRN 14797-73-0

CMF Cl O4



IC ICM G03C001-22

ICS C09B023-00

CC **74-2** (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)  
Section cross-reference(s): 41

ST **photog** sensitizer thiol hemicyanine dye

IT **Photographic** sensitizers

(hemicyanine dye with thiol group for **photog.**  
sensitizer)

IT Cyanine dyes

(hemicyanine; hemicyanine dye with thiol group for **photog**  
. sensitizer)

IT **248605-45-0P**

(hemicyanine dye with thiol group for **photog.**  
sensitizer)

L44 ANSWER 5 OF 22 HCA COPYRIGHT 2003 ACS

129:60532 High-chloride **photographic** emulsion with dimethylamine silver chloroiodide and antifoggant. Budz, Jerzy A.; Jagannathan, Seshadri; Royster, Tommie L., Jr. (Eastman Kodak Co., USA). U.S. US 5759762 A 19980602, 5 pp. (English). CODEN: USXXAM. APPLICATION: US 1997-866577 19970530.

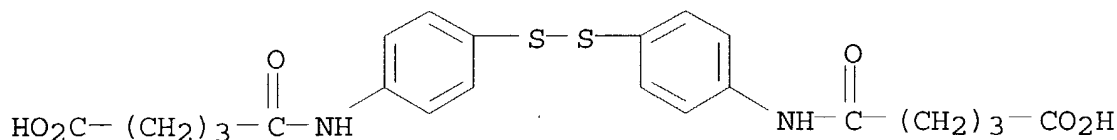
AB A soln. contg. a dimethylamine silver chloroiodide complex is added with an antifoggant to a **silver chloride** emulsion to form a stable Ag(I,Cl) **photog.** emulsion.

IT 208471-42-5

(stable silver chloroiodide **photog** emulsion prepn. using dimethylamine silver chloroiodide complexes and)

RN 208471-42-5 HCA

CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo- (9CI)  
(CA INDEX NAME)



IC ICM G03C001-34

NCL 430611000

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST silver chloroiodide **photog** emulsion prepn antifoggant; dimethylamine silver chloroiodide complex **photog** emulsion

IT **Photographic** emulsions

(silver chloroiodide; prepd. using dimethylamine silver chloroiodide complexes and antifoggants)

IT 208471-44-7

(stable silver chloroiodide **photog** emulsion prepn. using)

IT 208471-42-5 208540-87-8, Nalco 2341

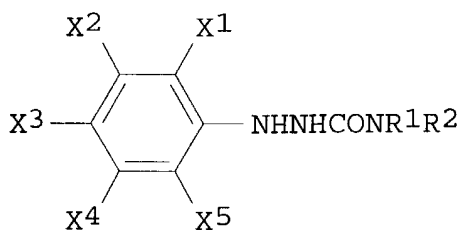
(stable silver chloroiodide **photog** emulsion prepn. using dimethylamine silver chloroiodide complexes and)

L44 ANSWER 6 OF 22 HCA COPYRIGHT 2003 ACS

127:197699 **Silver halide photographic**

light-sensitive material containing **photographic** stabilizer and N-phenyl-N'-carbamoylethydrazine as coloration reducing agent. Hirano, Katsuki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 09211814 A2 19970815 Heisei, 95 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-287288 19961011. PRIORITY: JP 1995-334197 19951130.

GI

**AB In a silver halide photog.**

light-sensitive material possessing at least one **photog.** layer on a support, any of these **photog.** layers contains a dye-forming coupler, a coloration reducing agent represented by a hydrazine deriv. (I) and  $R_3NHNHCONR_1R_2$  [ $R_1, R_2 = H$ , substituent;  $X_1 - X_5 = H$ , substituent; provided that a sum total of Hammett substituent const. ( $\sigma_p$ ) value of  $X_1, X_3$ , and  $X_5$  and Hammett substituent const. ( $\sigma_m$ ) of  $X_2$  and  $X_4$  is  $\leq 0.80$  to  $\leq 3.80$ ;  $R_3 = \text{heterocyclyl}$ ], and at least one stabilizers selected from (A) mercaptoheterocyclic compds. contg. SH group bonded to the C atom linked to the adjacent N atom, (B) quaternary arom. chalcogen azolium salts where the chalcogen is S, Se, or Te, (C) triazole or tetrazole possessing an ionic H bonded to the N atom of the heterocyclics, (D) dichalcogenides contg. a -X-X- bond between C atoms where X = divalent S, Se, or Te, and (E) org. compds. possessing a partial structure of thiosulfinic acid  $SO_2SM$  (M = proton or cation) or salt. This **photog.** material possesses high sensitivity and excellent storage stability, is capable of undergoing rapid processing, and can form **images** by substantially processing with an alkali bath alone for development.

**IT 149-30-4, 2-Mercaptobenzothiazole**

2785-06-0 16407-55-9 38650-26-9

104653-51-2 165116-10-9

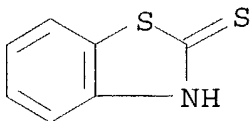
(photog. stabilizer; silver halide

photog. light-sensitive material contg. photog.

stabilizer and N-phenyl-N'-carbamoylhydrazine as coloration reducing agent)

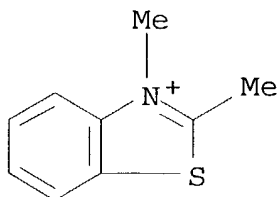
RN 149-30-4 HCA

CN 2(3H)-Benzothiazolethione (9CI) (CA INDEX NAME)

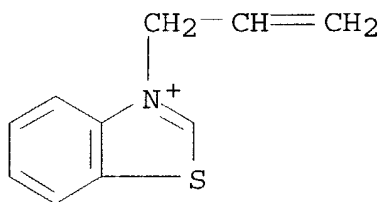


RN 2785-06-0 HCA

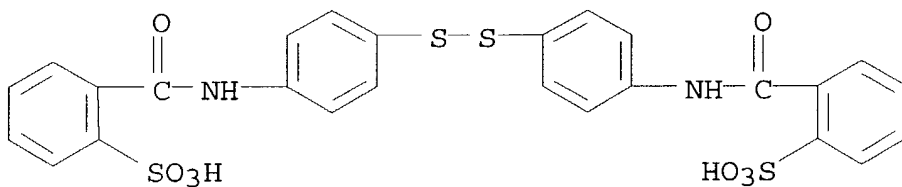
CN Benzothiazolium, 2,3-dimethyl-, iodide (8CI, 9CI) (CA INDEX NAME)

● I<sup>-</sup>

RN 16407-55-9 HCA  
 CN Benzothiazolium, 3-(2-propenyl)-, bromide (9CI) (CA INDEX NAME)

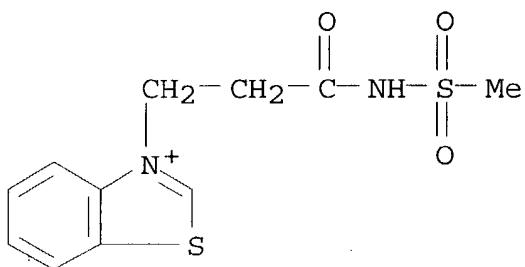
● Br<sup>-</sup>

RN 38650-26-9 HCA  
 CN Benzenesulfonic acid, 2,2'-[dithiobis(4,1-phenyleneiminocarbonyl)]bis-, disodium salt (9CI) (CA INDEX NAME)



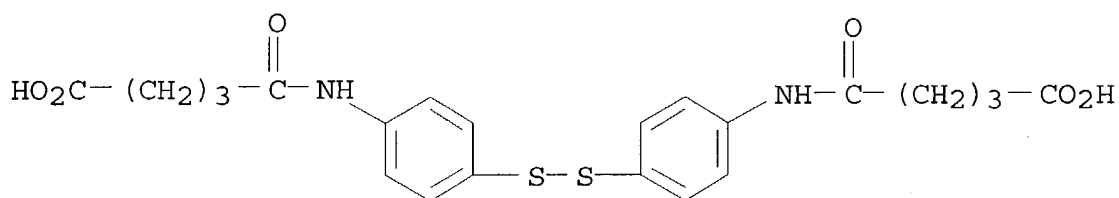
● 2 Na

RN 104653-51-2 HCA  
 CN Benzothiazolium, 3-[3-[(methylsulfonyl)amino]-3-oxopropyl]-, bromide (9CI) (CA INDEX NAME)

 $\bullet \text{Br}^{\cdot -}$ 

RN 165116-10-9 HCA

CN	Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-, disodium salt (9CI) (CA INDEX NAME)
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● 2 Na

IC ICM G03C007-392

ICS G03C007-392; G03C001-035; G03C001-42; G03C007-00

CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)

ST **photog** material; mercaptoheterocycle **photog**  
stabilizer; phenylcarbamoylhydrazine coloration reducing agent;  
quaternary arom chalcogen azolium salt; triazole tetrazole  
**photog** stabilizer; dichalcogenide **photog**  
stabilizer

IT Photographic films

(color; silver halide photog.

light-sensitive material contg. **photog.** stabilizer and

N-phenyl-N'-carbamoylhydrazine as coloration reducing agent)

IT Chalcogenides

(dichalcogenides for **photog.** stabilizers;

silver halide photog. light-sensitive material contg. photog. stabilizer and

N-phenyl-N'-carbamoylhydrazine as coloration reducing agent)

- IT Heterocyclic compounds  
(mercaptoheterocyclic compds.; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylethydrazine as coloration reducing agent)
- IT Quaternary ammonium compounds, uses  
(quaternary arom. chalcogen azolium salts; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylethydrazine as coloration reducing agent)
- IT **Photographic stabilizers**  
(**silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylethydrazine as coloration reducing agent)
- IT 182296-98-6 182297-11-6 182297-15-0 182297-31-0  
(coloration reducing agent; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylethydrazine as coloration reducing agent)
- IT 626-67-5D, reaction products with chloromethylated poly(divinylbenzene-styrene) 9003-70-7D, chloromethylated, reaction products with N-methylpiperidine  
(mordant; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylethydrazine as coloration reducing agent)
- IT 185841-55-8 185841-57-0 194160-98-0  
(**photog.** coupler; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylethydrazine as coloration reducing agent)
- IT 94-97-3 **149-30-4, 2-Mercaptobenzothiazole**  
1077-28-7, 1,2-Dithiolane-3-pentanoic acid 1887-29-2, Sodium benzenethiosulfonate **2785-06-0** 3753-27-3, Sodium 4-methylbenzenethiosulfonate 6264-40-0, 2-Mercapto-5-methylthio-1,3,4-thiadiazole **16407-55-9** 16766-09-9 35523-67-2 **38650-26-9** 62652-61-3, Sodium octylthiosulfonate 89853-03-2 99131-26-7 **104653-51-2** 110742-22-8 128626-71-1 **165116-10-9** 190123-72-9 194160-97-9  
(**photog.** stabilizer; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylethydrazine as coloration reducing agent)
- L44 ANSWER 7 OF 22 HCA COPYRIGHT 2003 ACS  
127:57960 **Silver halide photographic**  
emulsion containing stabilizer for low-fog images.  
Kubodera, Mitsuhiro; Ikeda, Takeshi; Tanaka, Shigeo (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 09138478 A2 **19970527**  
Heisei, 65 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-296893 19951115.
- AB The **photog.** emulsion with **AgCl** content  
.gtoreq.95 mol.% contains (A) .gtoreq.1 supersatd. sensitizing dye,

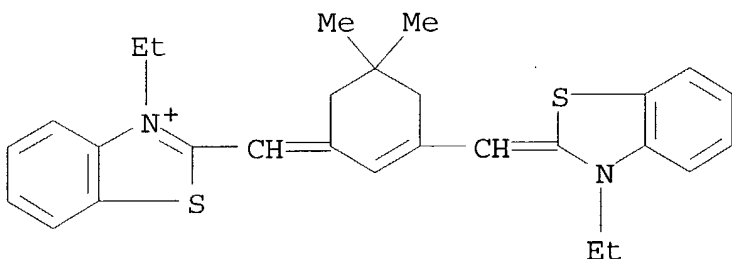
(B) .gtoreq.1 N-contg. heterocyclic mercapto deriv. soln. with degree of dissocn. .gtoreq.0.99, and (C) .gtoreq.1 compd. selected from (a) a compd. contg. a connection part comprising .gtoreq.3 S, .gtoreq.3 Se, or .gtoreq.3 Te, (b) an org. compd. having a heterocycle not contg. a connection part comprising .gtoreq.2 S, .gtoreq.2 Se, or .gtoreq.2 Te, (c) R11X11X12R12 (X11-12 = S, Se, Te; R11-12 = at. group needed to form cyclic, acyclic, heterocyclic group), and (d) S or thiosulfonic acid derivs. R21SO2SM21 or R31X31O2M31 (R21, R31 = aliph., arom., heterocyclic group; M21, M31 = H, monovalent cation; X31 = S, Se). The emulsion shows good storage stability and high sensitivity and gives low-fog images.

IT 70211-26-6 83846-69-9 113477-02-4  
154218-34-5

(sensitizing dye; **silver halide**  
**photog.** emulsion contg. stabilizer for low-fog  
images with high sensitivity)

RN 70211-26-6 HCA

CN Benzothiazolium, 3-ethyl-2-[[3-[(3-ethyl-2(3H)-benzothiazolylidene)methyl]-5,5-dimethyl-2-cyclohexen-1-ylidene]methyl]-, bromide (9CI) (CA INDEX NAME)

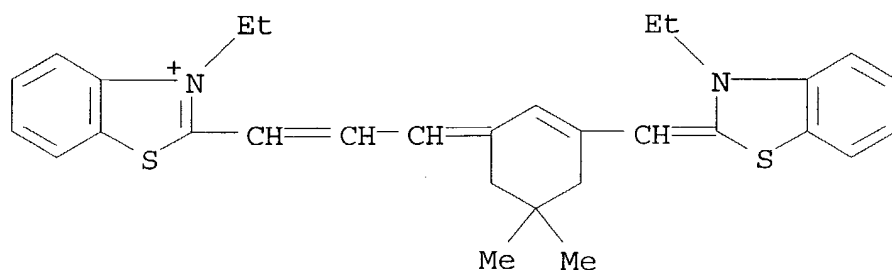


● Br<sup>-</sup>

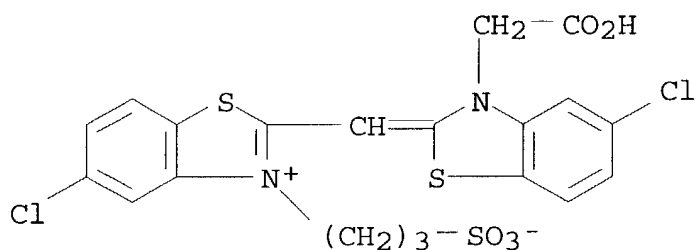
RN 83846-69-9 HCA

CN Benzothiazolium, 3-ethyl-2-[3-[3-[(3-ethyl-2(3H)-benzothiazolylidene)methyl]-5,5-dimethyl-2-cyclohexen-1-ylidene]-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

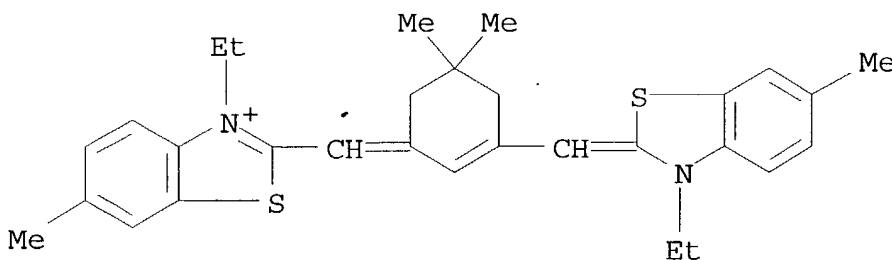


● I<sup>-</sup>

RN 113477-02-4 HCA  
 CN Benzothiazolium, 2-[[3-(carboxymethyl)-5-chloro-2(3H)-benzothiazolylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 154218-34-5 HCA  
 CN Benzothiazolium, 3-ethyl-2-[[3-[(3-ethyl-6-methyl-2(3H)-benzothiazolylidene)methyl]-5,5-dimethyl-2-cyclohexen-1-ylidene]methyl]-6-methyl-, bromide (9CI) (CA INDEX NAME)

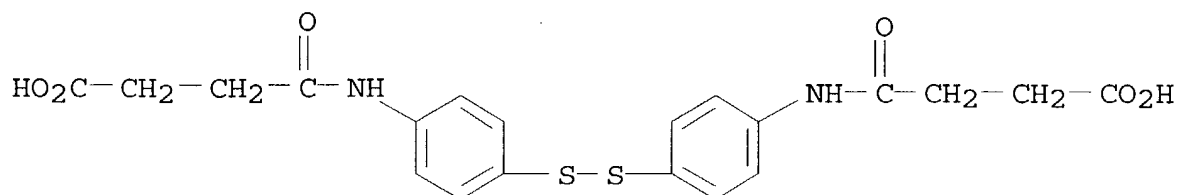
● Br<sup>-</sup>

IT 165116-08-5

(**silver halide photog.** emulsion  
contg. stabilizer for low-fog **images** with high  
sensitivity)

RN 165116-08-5 HCA

CN Butanoic acid, 4,4'-[dithiobis(4,1-phenyleneimino)]bis[4-oxo-,  
disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C001-34

ICS G03C001-035; G03C001-09; G03C001-14; G03C007-00

CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)

ST **photog** emulsion sulfur selenium tellurium stabilizer;  
sensitizing dye supersatd **photog** emulsion; heterocycle  
mercapto fog inhibitor **photog** emulsion

IT **Photographic** emulsions

**Photographic** fog inhibitors

**Photographic** sensitizers

(**silver halide photog.** emulsion  
contg. stabilizer for low-fog **images** with high  
sensitivity)

IT 86-93-1 583-39-1 3179-31-5 7271-44-5 14070-48-5 15182-68-0  
32873-56-6 68744-65-0

(fog inhibitor; **silver halide photog**  
. emulsion contg. stabilizer for low-fog **images** with  
high sensitivity)

IT 6200-35-7 47867-58-3 70211-20-0 70211-26-6

83846-69-9 113477-02-4 116528-52-0

154218-34-5

(sensitizing dye; **silver halide**  
**photog.** emulsion contg. stabilizer for low-fog  
**images** with high sensitivity)

IT 103-34-4 538-70-5, 1,2-Dithiane-3-butanoic acid 657-84-1  
930-35-8, 1,3-Dithiole-2-thione 934-36-1, 1,3-Benzodithiole-2-  
thione 971-15-3 1077-28-7, 1,2-Dithiolane-3-pentanoic acid  
3354-42-5, 3H-1,2-Benzodithiole-3-thione 7704-34-9, Sulfur, uses  
16766-09-9 28519-50-8 165116-08-5

(**silver halide photog.** emulsion  
contg. stabilizer for low-fog **images** with high  
sensitivity)

L44 ANSWER 8 OF 22 HCA COPYRIGHT 2003 ACS

127:57954 **Silver halide photographic**

material with improved storage stability. Nojima, Hiroyuki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 09138474 A2 19970527 Heisei, 55 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-318439 19951114.

AB The material comprises .gtoreq.1 redn.-sensitized **Ag**

**halide photog.** emulsion layer contg. R1X1X2R2

(R1-2 = alkyl, aryl, heterocycle, amino, R3C:O, R4OC:O, R3R5NC:O, R3C:NH, R4OC:NH, R3R5NC:NH, R3C:S, R4OC:S, R3R5NC:S; R3, R5 = H, alkyl, aryl, heterocycle; X1-2 = S, Se, Te; R1-2 and X1-2 may form ring) and an oxidizing agent to Ag. The material shows high sensitivity, low fog, and improved storage stability.

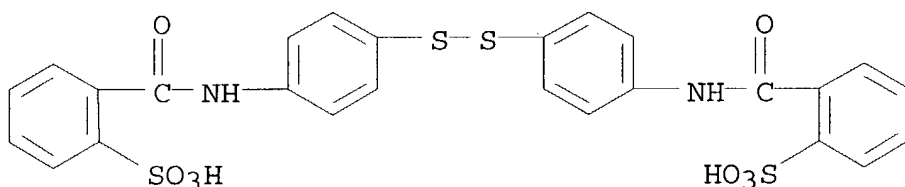
IT 38650-26-9 165116-10-9

(**silver halide photog.** material

contg. oxidizing agent with improved storage stability)

RN 38650-26-9 HCA

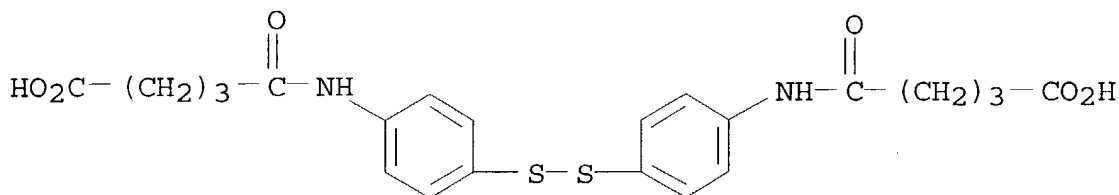
CN Benzenesulfonic acid, 2,2'-[dithiobis(4,1-phenyleneiminocarbonyl)]bis-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 165116-10-9 HCA

CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C001-06

ICS G03C001-00; G03C001-015; G03C001-08; G03C001-09; G03C001-34;

G03C007-00

CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)

ST **silver halide photog** sulfur oxidizing  
agent; selenium oxidizing agent **photog silver**  
**halide**; tellurium oxidizing agent **photog**  
**silver halide**

IT Oxidizing agents

Photographic emulsions

(**silver halide photog.** material  
contg. oxidizing agent with improved storage stability)

IT 100-32-3 13431-03-3, Benzenethiosulfonic acid 16766-09-9  
38650-26-9 165116-10-9

(**silver halide photog.** material  
contg. oxidizing agent with improved storage stability)

L44 ANSWER 9 OF 22 HCA COPYRIGHT 2003 ACS

126:205418 Thermal processing type **silver halide**

**photographic** material containing a disulfide derivative.

Okada, Hisashi; Totani, Ichizo; Kojima, Tetsuo (Fuji Photo Film Co  
Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 09005926 A2 **19970110**

Heisei, 38 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
1996-85994 19960315. PRIORITY: JP 1995-115274 19950418.

AB Claimed **photog.** material contains a disulfide compd.

R1SSR2 (I; R1 = aryl, pyridyl, quinolyl; R2 = aryl, pyridyl,  
quinolyl having substituent selected from aliph. hydrocarbon, aryl,  
amino, alkoxy, aryloxy, acylamino, carbamoyl, sulfonylamino,  
phosphonamido, sulfamoyl, alkylthio, arylthio, thiocarbonyl,  
sulfonyl, sulfinyl, ureide, thioureide, thioamido, OH, mercapto,  
sulfo, phosphono, hydroxamic acid residue, heterocyclic group).

Also claimed is the **photog.** material contg., in addn. to  
the compd. I, a polyhalomethane QYnC(X1)(X2)A (II; Q = aryl,  
heterocyclic group; X1, X2 = halo; Y = C(LO), SO2, SO; A = H, halo,  
electron-attracting group; n = 0, 1). It has low fog, and provides  
an **image** with improved neutral color tone, and also has  
the stability of both before and after processing. Suitable compd.

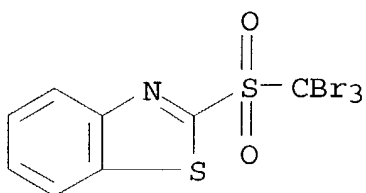
II are bis(2-benzoamidophenyl)disulfide, bis[4-  
(phenylaminocarbonyl)phenyl]disulfide, bis[2-  
(phenylsulfoamino)phenyl]disulfide, etc., and suitable compd. II are  
**benzothiazol-2-yl-sulfonyl-dibromomethane**,  
2-(tribromomethylsulfonyl)-5-methyl-thiadiazole, etc. The additives  
are incorporated in the thermal processed type **photog.**  
material comprising Ag behenate, preformed Ag(Br, I) crystals,  
phthalazone, poly(vinyl butyral) binder, etc.

IT **31274-42-7**

(for thermal processing type **silver halide**  
**photog.** material)

RN 31274-42-7 HCA

CN Benzothiazole, 2-[(tribromomethyl)sulfonyl]- (8CI, 9CI) (CA INDEX  
NAME)



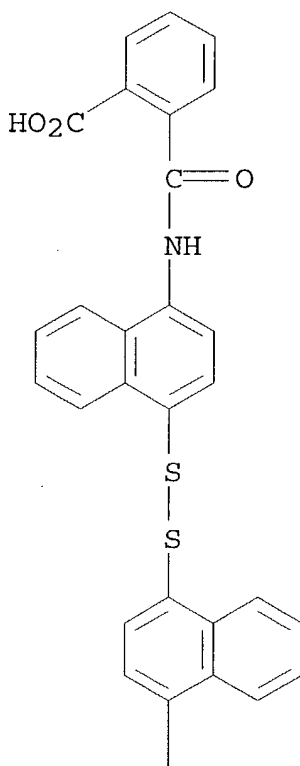
IT 187744-17-8

(thermal processing type **silver halide**  
**photog.** material contg. disulfide deriv. to improve color  
tone and reduce fog)

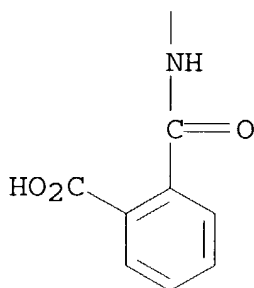
RN 187744-17-8 HCA

CN Benzoic acid, 2,2'-[dithiobis(4,1-naphthalenediyliminocarbonyl)]bis-  
(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

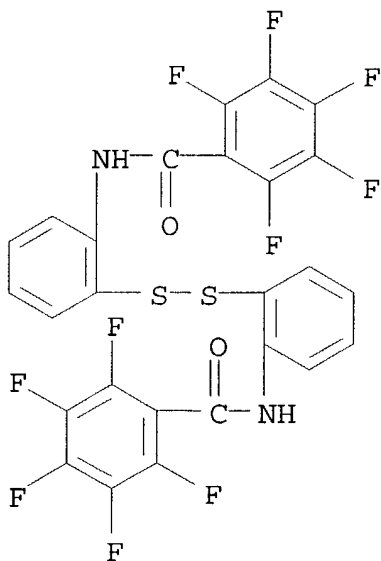


IT 69200-87-9P 187744-22-5P 187744-23-6P  
187744-24-7P

(thermal processing type **silver halide**  
**photog.** material contg. disulfide deriv. to improve color  
tone and reduce fog)

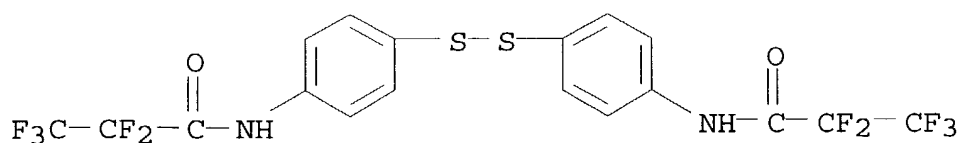
RN 69200-87-9 HCA

CN Benzamide, N,N'-(dithiodi-2,1-phenylene)bis[2,3,4,5,6-pentafluoro-  
(9CI) (CA INDEX NAME)

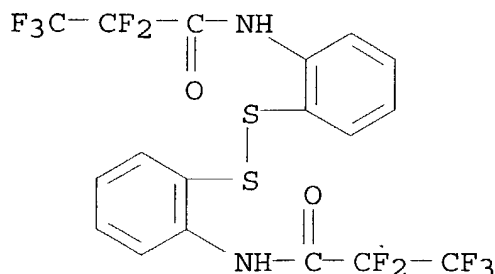


RN 187744-22-5 HCA

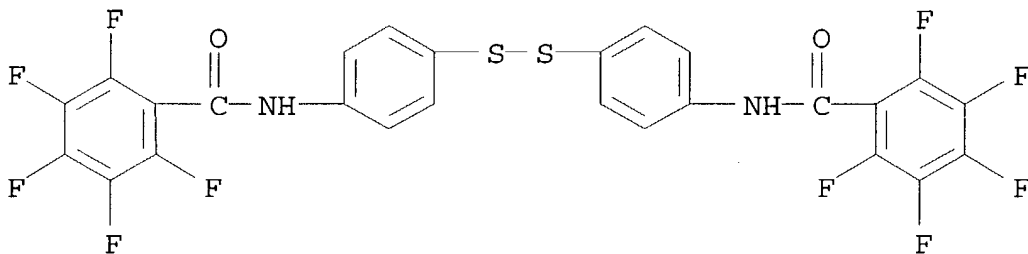
CN	Propanamide, N,N'-(dithiodi-4,1-phenylene)bis[2,2,3,3,3-pentafluoro- (9CI) (CA INDEX NAME)
----	---



RN 187744-23-6 HCA

CN Propanamide, N,N'-(dithiodi-2,1-phenylene)bis[2,2,3,3,3-pentafluoro-  
(9CI) (CA INDEX NAME)

RN 187744-24-7 HCA

CN Benzamide, N,N'-(dithiodi-4,1-phenylene)bis[2,3,4,5,6-pentafluoro-  
(9CI) (CA INDEX NAME)

IC ICM G03C001-498

ICS G03C001-498

CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)ST thermal processing type **photog** material; disulfide deriv  
additive **photog** material; aryl disulfide additive  
**photog** material; pyridyl disulfide additive **photog**  
material; polyhalomethane additive **photog** materialIT **Photographic** films

Photographic fog inhibitors

Photographic stabilizers

(thermal processing type **silver halide****photog.** material contg. disulfide deriv. to improve color  
tone and reduce fog)IT 31183-89-8P, (2,2'-Diamino-5,5'-dichlorodiphenyl)disulfide  
(disulfide compds. from; for thermal processing type  
**silver halide photog.** material)IT 62-53-3, Aniline, reactions 75-36-5, Acetylchloride 85-46-1,  
1-Naphthalenesulfonyl chloride 86-84-0, 1-Naphthylisocyanate  
93-11-8, 2-Naphthalenesulfonyl chloride 95-24-9, 2-Amino-6-  
**chlorobenzothiazole** 98-09-9, Benzenesulfonyl chloride  
98-59-9, p-Toluenesulfonyl chloride 98-68-0, p-

Methoxybenzenesulfonyl chloride 98-88-4, Benzoyl chloride 103-71-9, Phenylisocyanate, reactions 119-80-2 121-44-8, reactions 356-42-3, Pentafluoropropionic anhydride 722-27-0, 4,4'-Dithiodianiline 773-64-8, 2-Mesitylenesulfonyl chloride 1141-88-4, 2,2'-Dithiodianiline 2243-83-6, 2-Naphthalenecarboxylic acid chloride 2251-50-5, Pentafluorobenzoyl chloride 2524-64-3, Diphenylchlorophosphate 2536-91-6, 2-Amino-6-methylbenzothiazole 7719-09-7, Thionyl chloride 15945-07-0, 2,4,5-Trichlorobenzenesulfonyl chloride (disulfide compds. from; for thermal processing type **silver halide photog.** material)

- IT 31274-42-7  
(for thermal processing type **silver halide photog.** material)
- IT 160029-59-4  
(thermal processing type **silver halide photog.** material contg. disulfide deriv. and halomethane deriv.)
- IT 135-57-9 115484-15-6 **187744-17-8** 187744-19-0  
187744-20-3 187744-21-4 187744-26-9 187744-28-1  
(thermal processing type **silver halide photog.** material contg. disulfide deriv. to improve color tone and reduce fog)
- IT 3982-42-1P 4104-52-3P 4490-97-5P 4508-09-2P 14897-91-7P  
16766-10-2P 52017-43-3P **69200-87-9P** 187744-16-7P  
187744-18-9P **187744-22-5P** **187744-23-6P**  
**187744-24-7P** 187744-25-8P 187744-27-0P 187744-29-2P  
187744-30-5P 187744-31-6P 187744-32-7P 187744-33-8P  
(thermal processing type **silver halide photog.** material contg. disulfide deriv. to improve color tone and reduce fog)

L44 ANSWER 10 OF 22 HCA COPYRIGHT 2003 ACS

126:205389 **Silver halide photographic**

material with high sensitivity and reduced fog. Yamashita, Seiji (Fuji Photo Film Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 09015773 A2 19970117 Heisei, 21 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-165342 19950630.

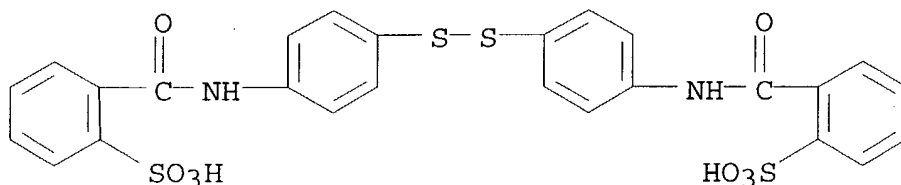
- AB In the title material including at least one **photog.** emulsion layer, the emulsion contains **Ag halide** grains 50-100 % of which are tabular grains with an aspect ratio of .gtoreq.2, contain .gtoreq.20 % **AgCl**, and have {100} surfaces. During the emulsion prepn., an oxidn. agent is added.

- IT **38650-26-9**  
(oxidn. agent additive to **photog.** emulsion)

RN 38650-26-9 HCA

CN Benzenesulfonic acid, 2,2'-[dithiobis(4,1-phenyleneiminocarbonyl)]bis-, disodium salt (9CI) (CA INDEX NAME)

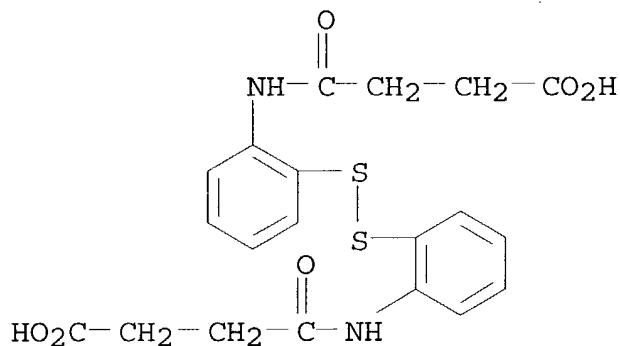




●2 Na

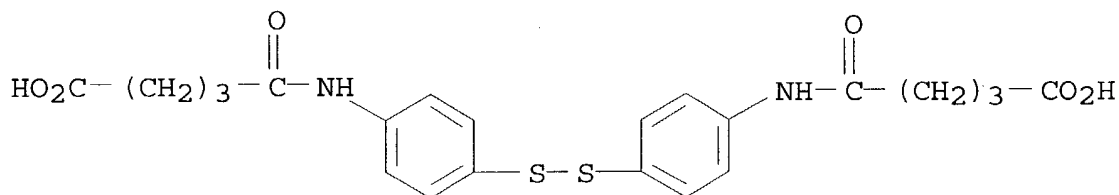
- IC ICM G03C001-035  
ICS G03C001-035; G03C001-015; G03C001-06
- CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST **silver halide photog** emulsion film
- IT **Photographic** emulsions  
Photographic films  
(**silver halide photog.** material with high sensitivity and reduced fog)
- IT 1077-28-7, 1,2-Dithiolane-3-pentanoic acid 7722-84-1,  
Hydrogenperoxide, uses 31999-88-9 **38650-26-9**  
(oxidn. agent additive to **photog.** emulsion)
- L44 ANSWER 11 OF 22 HCA COPYRIGHT 2003 ACS  
125:208339 **Silver halide photographic**  
emulsion with localized phase containing cyanometal complex providing improved speed/fog ratio. Kaga, Makoto; Tanaka, Shigeo (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08171155 A2 19960702 Heisei, 33 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 1994-314821 19941219.
- AB The **photog.** emulsion has the following characteristics;  
(1) the grains have **AgCl** content of .gtoreq.95 mol%, (2) they have localized microphases contg. .gtoreq.10 times higher concn. of cyano-metal complex than other parts of the grains, (3) the phases rich in cyano-metal complex are localized in the surface layer sharing outer 50% (vol.-wise) of the grain, (4) the crystn. to impregnate the cyano-metal complex is conducted at pH .gtoreq.7, and (5) the emulsion is addeds by a compd. selected from (a) a compd. contg. a structure comprising chain of .gtoreq.3 S, Se, or Te atoms, (b) a heterocyclic org. compd. contg. .gtoreq.2 S, Se, or Te atoms sepd. by other atom(s) from each other, (c) a compd. represented by the formula R11X11X12R12 (R11, R12 = atom group to form cyclic or non-cyclic mol.; X11, X12 = S, Se, Te) and (d) inorg. sulfur, thiosulfonate, R21SO2SM21 (R21 = aliph., arom., heterocyclic compd.; M21 = cation, H), or R31X31O2M31 (X31 = S, Se; M31 and R31 same as M21 and R21). The emulsion has high sensitivity and low fog, reduced failure from reciprocity law, and good prodn. consistency, and is particularly suitable for the application to **photog** . color paper.

IT 165116-09-6 165116-10-9  
 (Ag halide photog. emulsion with  
 localized phase contg. cyanometal complex for high speed/fog  
 ratio)  
 RN 165116-09-6 HCA  
 CN Butanoic acid, 4,4'-[dithiobis(2,1-phenyleneimino)]bis[4-oxo-,  
 disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 165116-10-9 HCA  
 CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-,  
 disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C001-015  
 ICS G03C001-035; G03C001-07; G03C001-09; G03C001-10  
 CC 74-2 (Radiation Chemistry, Photochemistry, and  
 Photographic and Other Reprographic Processes)  
 ST silver halide photog emulsion making;  
 cyano metal complex photog emulsion; polythio compd  
 additive photog emulsion; polyseleno compd additive  
 photog emulsion; polytelluro compd additive photog  
 emulsion

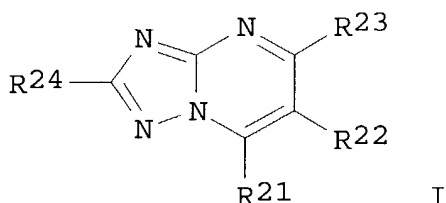
- IT **Photographic emulsions**  
 (Ag halide photog. emulsion with  
 localized phase contg. cyanometal complex for high speed/fog  
 ratio)
- IT 62-46-4, 1,2-Dithiolane-3-pentanoic acid 103-34-4 722-27-0  
 824-79-3 930-35-8, 1,3-Dithiole-2-thione 971-15-3 7704-34-9,  
 Sulfur, uses 13943-58-3, Tetrapotassium hexacyanoferrate  
 14874-33-0, Tetrapotassium hexacyanorhenate 15002-31-0,  
 Tetrapotassium hexacyanoruthenate 16766-09-9 16920-56-2,  
 Dipotassium hexachloroiridate 28519-50-8 **165116-09-6**  
**165116-10-9** 181018-64-4, Benzo[b]thiophene-2,3-dithione  
 (Ag halide photog. emulsion with  
 localized phase contg. cyanometal complex for high speed/fog  
 ratio)

L44 ANSWER 12 OF 22 HCA COPYRIGHT 2003 ACS

125:208304 **Silver halide photographic**

material having high sensitivity and excellent reciprocity failure  
 characteristic. Kuroda, Koichiro; Tanaka, Shigeo; Ikeda, Takeshi;  
 Nojima, Takahiko (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo  
 Koho JP 08171168 A2 19960702 Heisei, 66 pp. (Japanese). CODEN:  
 JKXXAF. APPLICATION: JP 1994-312080 19941215.

GI



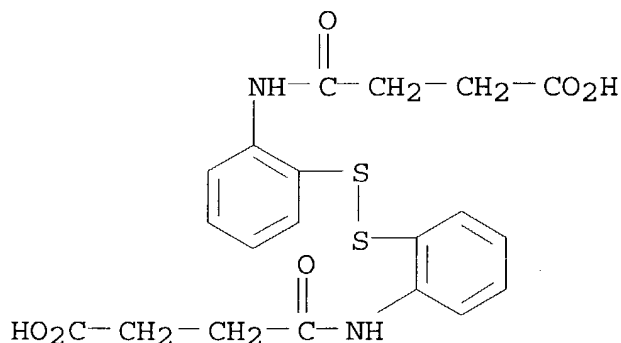
- AB The title **Ag halide photog.** material  
 has .gtoreq.1 **Ag halide** emulsion layers which is  
 made up of **Ag halide** emulsion consisting of  
 .gtoreq.95 mol% of **AgCl** and a metal compd. The  
**photog.** material is chem. sensitized by Se or Te, and the  
**Ag halide** emulsion layer contains .gtoreq.1 compd.  
 selected from: (1) (X11)<sub>n</sub>Q11(SY11)<sub>m</sub> {X11 = hydrophilic group; Q11 =  
 org. (m + n) valent group; Y11 = H, amidino, at. group forming  
 monovalent cation; m, n = 1, 2}; (2) I (R21-24 = H, alkyl, amino,  
 hydroxy, alkoxy, heterocyclyl, and the like; R21 or R23 is OH); and  
 (3) R31X31X32R32 (X31,32 = S, Se, Te; R33,32 = at. group forming  
 independently cyclic or heterocyclic group or together with X33 and  
 X32), R41SO2SM41 (R41 = aliph., arom., heterocyclyl; M41 = H,  
 monovalent cation), or R51X51O2M51 (X51 = S, Se; R51 = aliph.,  
 arom., heterocyclyl; M51 = H, monovalent cation).

- IT **165116-09-6 165116-10-9**  
 (silver halide photog. material

having high sensitivity and excellent reciprocity failure characteristic)

RN 165116-09-6 HCA

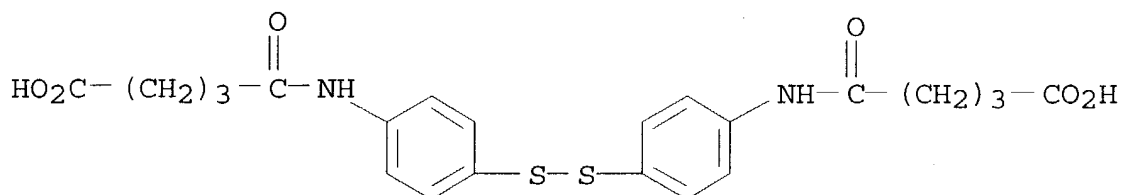
CN Butanoic acid, 4,4'-[dithiobis(2,1-phenyleneimino)]bis[4-oxo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 165116-10-9 HCA

CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C001-09

ICS G03C001-035; G03C001-07; G03C001-10; G03C001-34; G03C007-392

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST selenium sensitized **silver halide photog** material; sulfur sensitized **silver halide photog** material; tellurium sensitized **silver halide photog** material; chem sensitizer **silver halide photog** material

IT Photographic emulsions  
Photographic sensitizers

(**silver halide photog.** material  
having high sensitivity and excellent reciprocity failure  
characteristic)

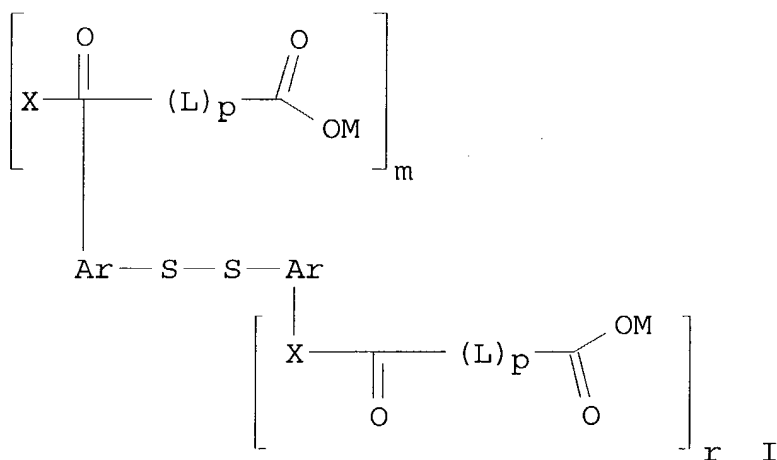
IT 62-46-4, 1,2-Dithiolane-3-pentanoic acid 971-15-3 2503-56-2  
13943-58-3, Tetrapotassium hexacyanoferrate 16766-09-9  
16920-56-2, Dipotassium hexachloroiridate 19121-78-9, Dipotassium  
hexabromoiridate 22615-69-6 23249-95-8 42546-07-6  
53918-03-9, Sodium 2-mercaptobenzimidazole-5-sulfonate 99131-44-9  
121607-15-6 146419-35-4 **165116-09-6 165116-10-9**  
181018-63-3 181018-64-4, Benzo[b]thiophene-2,3-dithione

(**silver halide photog.** material  
having high sensitivity and excellent reciprocity failure  
characteristic)

L44 ANSWER 13 OF 22 HCA COPYRIGHT 2003 ACS

123:183318 Water-soluble disulfides in **silver halide**  
emulsions. Budz, Jerzy A.; Burgmaier, George J.; Klaus, Roger L.;  
Wen, Xin (Eastman Kodak Company, USA). U.S. US 5418127 A 19950523,  
13 pp. Cont.-in-part of U.S. Ser. No. 68,814, abandoned. (English).  
CODEN: USXXAM. APPLICATION: US 1994-210826 19940318. PRIORITY: US  
1993-68814 19930528.

GI



AB A disulfide compd. represented by the following formula I [X = O, NH  
or NR, where R is a substituent; m and r are independently 0, 1 or  
2; M is H or a cationic species; Ar is an arom. group; and L is a  
linking group, where p is 0 or 1]. A **Ag halide**  
emulsion comprising the disulfide compds. and a **photog.**  
element comprising a **Ag halide** emulsion in  
reactive assocn. with the disulfide compds. and a method of making  
same are also described. The disulfide compds. are water-sol., have  
good antifogging properties, and have min. impact on sensitivity.

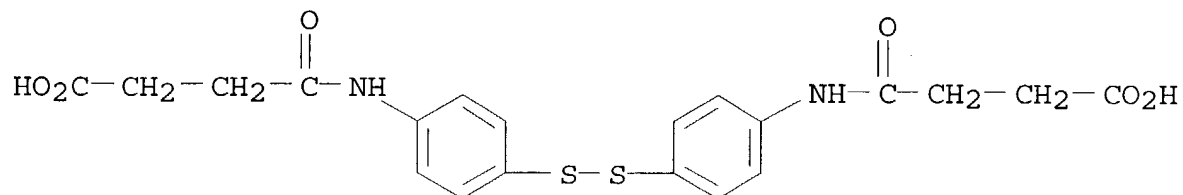
IT **165116-08-5 165116-09-6 165116-10-9**

165116-11-0

(water-sol.; **photog.** fog inhibitor)

RN 165116-08-5 HCA

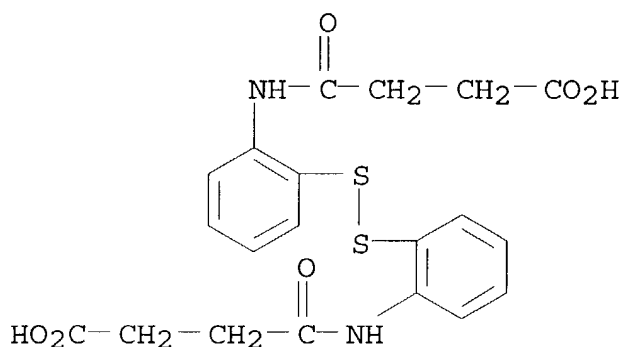
CN Butanoic acid, 4,4'-[dithiobis(4,1-phenyleneimino)]bis[4-oxo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 165116-09-6 HCA

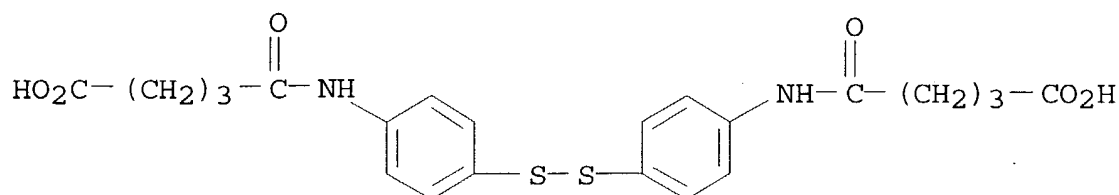
CN Butanoic acid, 4,4'-[dithiobis(2,1-phenyleneimino)]bis[4-oxo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 165116-10-9 HCA

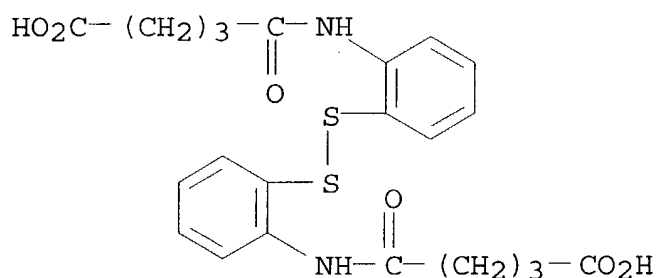
CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 165116-11-0 HCA

CN Pentanoic acid, 5,5'-[dithiobis(2,1-phenyleneimino)]bis[5-oxo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C001-34

ICS G03C001-09

NCL 430611000

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 23

ST water sol disulfide **photog** emulsion; fog inhibitor disulfideIT **Photographic** fog inhibitors (Water-sol. disulfides)

IT 165116-07-4 165116-08-5 165116-09-6

165116-10-9 165116-11-0

(water-sol.; **photog.** fog inhibitor)

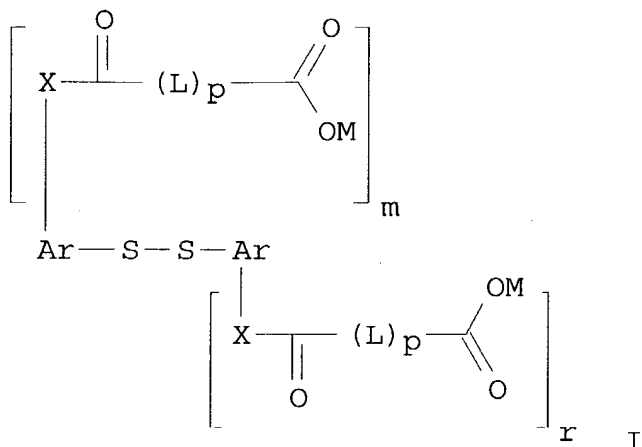
L44 ANSWER 14 OF 22 HCA COPYRIGHT 2003 ACS

123:70176 Water-soluble disulfides in **silver halide**

emulsions.. Budz, Jerzy Antoni; Burgmaier, George John; Laus, Roger Lee; Wen, Xin (Eastman Kodak Co., USA). Eur. Pat. Appl. EP 627657 A2 19941207, 26 pp. DESIGNATED STATES: R: BE, CH, DE, FR, GB, IT,

LI, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1994-201441  
 19940521. PRIORITY: US 1993-68814 19930528; US 1994-210826  
 19940318.

GI



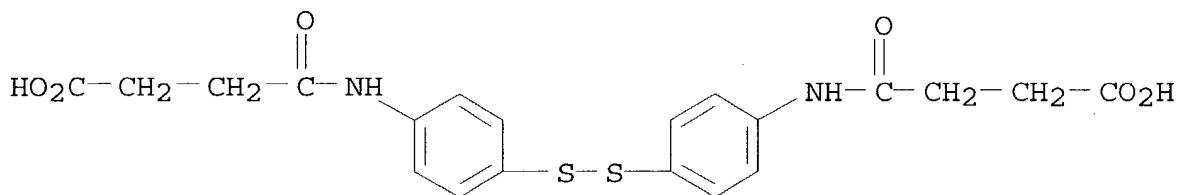
AB A disulfide compd. is described represented by the following formula  
 I [X is independently -O-, -NH- or -NR-, where R is a substituent; m  
 and r are independently 0, 1 or 2 provided that m + r is .gtoreq.1;  
 M is -H or a cationic species; Ar is an arom. group; and L is a  
 linking group, where p is 0 or 1]. A **Ag halide**  
 emulsion comprising the disulfide compds. do not need volatile org.  
 solvents and circumvents the disadvantage of using solid particle  
 dispersions.

IT 165116-08-5 165116-09-6 165116-10-9  
 165116-11-0

(water-sol. disulfides as **photog.** fog inhibitors)

RN 165116-08-5 HCA

CN Butanoic acid, 4,4'-[dithiobis(4,1-phenyleneimino)]bis[4-oxo-,  
 disodium salt (9CI) (CA INDEX NAME)

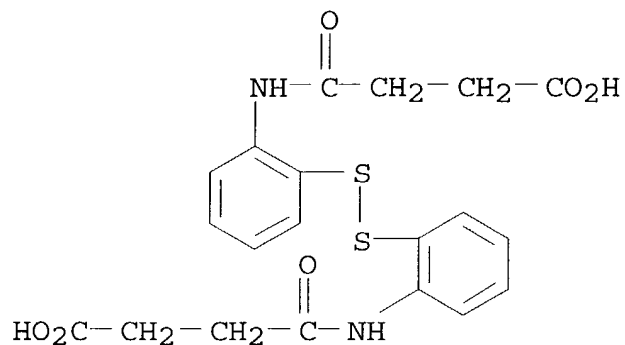


● 2 Na

RN 165116-09-6 HCA

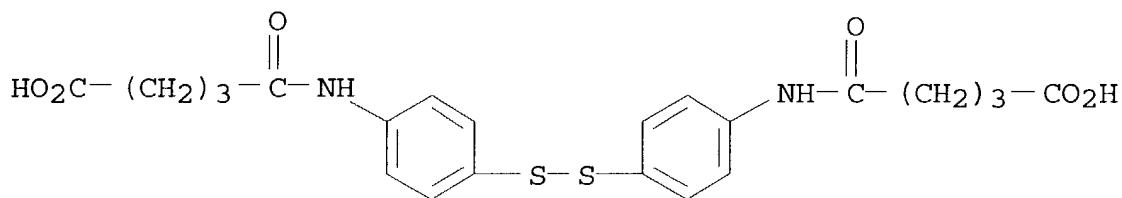


CN Butanoic acid, 4,4'-[dithiobis(2,1-phenyleneimino)]bis[4-oxo-,  
disodium salt (9CI) (CA INDEX NAME)



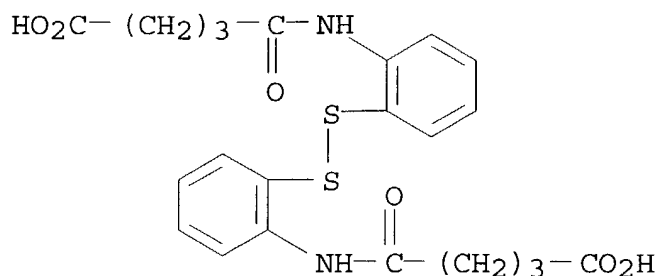
● 2 Na

RN 165116-10-9 HCA  
CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-,  
disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 165116-11-0 HCA  
CN Pentanoic acid, 5,5'-[dithiobis(2,1-phenyleneimino)]bis[5-oxo-,  
disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C001-34  
ICS C07C323-20; C07C323-41; C07D213-75  
CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)  
ST water sol sulfide **photog** emulsion; fog inhibitor  
**photog** water sol  
IT **Photographic** fog inhibitors  
(water-sol. disulfides)  
IT Disulfides  
(water-sol. disulfides as **photog.** fog inhibitors)  
IT **Photographic** emulsions  
(water-sol. disulfides in **silver halide**  
emulsions.)  
IT 165116-06-3 165116-07-4 165116-08-5 165116-09-6  
165116-10-9 165116-11-0  
(water-sol. disulfides as **photog.** fog inhibitors)

L44 ANSWER 15 OF 22 HCA COPYRIGHT 2003 ACS  
122:302893 **Silver halide photographic**  
material and **image** formation. Nagashima, Toshiharu; Arai,  
Takeo (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP  
06313934 A2 19941108 Heisei, 24 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 1993-102712 19930428.

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

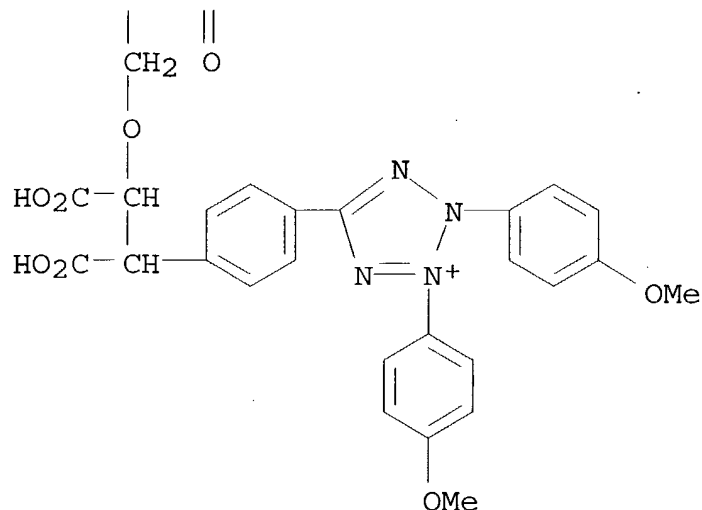
AB The title **photog.** material, having .gtoreq.1  
gelatin-contg. **Ag halide** emulsion layer on 1  
side of a support, contains a tetrazonium compd. I [R1, R2 = H,  
(substituted) alkyl, aryl, allyl, aralkyl, carbonyl, alkoxy,  
allyloxy, heterocycle; A = linking group with (m + 2) valences which  
is not .pi.-electron-conjugated with the .pi.-electron system of the

IT 162549-95-3  
(silver halide photog. film contg.  
tetrazonium compd.)

CN 2H-Tetrazolium, 5-[4-[1,2-dicarboxy-2-[2-[[[2-[[[(4-mercaptophenyl)amino]carbonyl]amino]ethyl]amino]carbonyl]-3-methoxy-3-oxopropoxy]ethyl]phenyl]-2,3-bis(4-methoxyphenyl)-, chloride (9CI)  
(CA INDEX NAME)

SC1=CC=C(C=C1)NC(=O)NC(CCN(C=O)C)C(=O)OC

PAGE 2-A

● Cl<sup>-</sup>

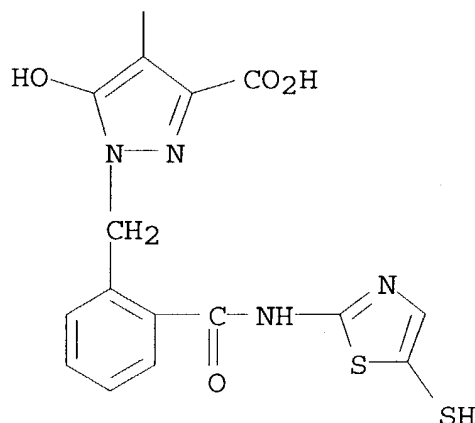
- IC ICM G03C001-06  
ICS G03C005-29
- CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST tetrazonium salt **silver halide photog**;  
formazan dye residual color **photog**
- IT **Photographic** films  
(**silver halide photog.** film contg. tetrazonium compd.)
- IT 162549-83-9 162549-85-1 162549-86-2 162549-87-3 162549-88-4  
162549-89-5 162549-90-8 162549-91-9 162549-92-0 162549-93-1  
162549-94-2 **162549-95-3** 162549-96-4 162549-97-5  
162549-98-6 162549-99-7 162550-00-7 162550-01-8 162550-02-9  
(**silver halide photog.** film contg. tetrazonium compd.)
- L44 ANSWER 16 OF 22 HCA COPYRIGHT 2003 ACS  
119:237866 **Silver halide photographic**  
photosensitive material containing diffusion-resistant dye. Kagawa, Nobuaki; Kawashima, Yasuhiko; Usagawa, Yasushi; Hirabayashi, Shigeto (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 05011409 A2 19930122 Heisei, 28 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1991-189486 19910704.
- AB The title material contains in .gtoreq.1 layer(s) of hydrophilic protective colloidal layers coated on a support .gtoreq.1 Ag salt of methine dyes (Dye)11[-(L)12-Sal]13 (Dye = a methine dye structure; L

IT 151090-15-2D, silver salt  
(photog. material with hydrophilic protective colloidal  
layer contg.)

CN 1H-Pyrazole-3-carboxylic acid, 4-[5-[3-carboxy-5-hydroxy-1-[[2-[[[(5-mercapto-2-thiazolyl)amino]carbonyl]phenyl]methyl]-1H-pyrazol-4-yl]-2,4-pentadienylidene]-4,5-dihydro-1-[[2-[[[(5-mercapto-2-thiazolyl)amino]carbonyl]phenyl]methyl]-5-oxo- (9CI) (CA INDEX NAME)

O=C1NC(=O)C(=C1)C(=O)OCCc2ccccc2C(=O)Nc3cc(S)nc3

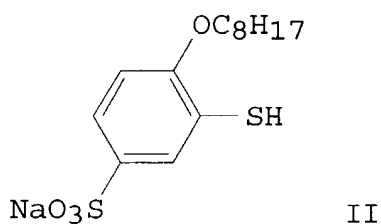
PAGE 2-A



IC ICM G03C001-83  
 CC **74-2** (Radiation Chemistry, Photochemistry, and  
 Photographic and Other Reprographic Processes)  
 ST diffusion resistant dye **photog** material  
 IT **Photographic** films  
 (diffusion-resistant dyes for)  
 IT 147641-66-5D, silver salt 147641-67-6D, silver salt  
 147641-68-7D, silver salt 151067-89-9D, silver salt  
 151090-08-3D, silver salt 151090-09-4D, silver salt  
 151090-10-7D, silver salt 151090-11-8D, silver salt  
 151090-12-9D, silver salt 151090-13-0D, silver salt  
 151090-14-1D, silver salt **151090-15-2D**, silver salt  
 151090-16-3D, silver salt 151090-17-4D, silver salt  
 151090-18-5D, silver salt 151090-19-6D, silver salt  
 151090-20-9D, silver salt 151090-21-0D, silver salt  
 151090-22-1D, silver salt 151090-23-2D, silver salt  
 (**photog.** material with hydrophilic protective colloidal  
 layer contg.)

L44 ANSWER 17 OF 22 HCA COPYRIGHT 2003 ACS  
 116:48968 Heat-developable **photographic** material. Hirai,  
 Hiroyuki; Yabuki, Yoshiharu (Fuji Photo Film Co., Ltd., Japan).  
 Jpn. Kokai Tokkyo Koho JP 03071131 A2 19910326 Heisei, 30 pp.  
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 1989-207511 19890810.

GI



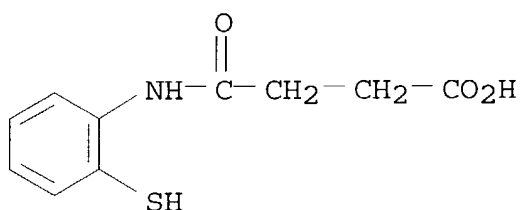
AB The title material comprises photosensitive **Ag halides**, a reducing agent, a binder, and RSM (I) [R = alkyl, alkenyl, aryl, etc., which has at least one SO<sub>3</sub>H or CO<sub>2</sub>H (or a salt thereof) as a substituent; M = H, alkali metal, ammonium]. Benzenesulfonic acid salt II is an example of I. The title material shows high sensitivity.

IT 138502-98-4

(heat-developable **photog.** materials contg.)

RN 138502-98-4 HCA

CN Butanoic acid, 4-[(2-mercaptophenyl)amino]-4-oxo- (9CI) (CA INDEX NAME)



IC ICM G03C008-40

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST heat developable **photog** material; thiol heat developable **photog** material

IT 138502-94-0 138502-95-1 138502-96-2 138502-97-3

138502-98-4 138502-99-5 138503-00-1

(heat-developable **photog.** materials contg.)

L44 ANSWER 18 OF 22 HCA COPYRIGHT 2003 ACS

114:52831 **Photographic** material containing compound comprising sensitizing dye and antifoggant functional groups. Saitou, Mitsuo; Ukai, Toshinao; Ikeda, Tadashi (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 372573 A2 **19900613**, 49 pp. DESIGNATED STATES: R: DE, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1989-122697 19891208. PRIORITY: JP 1988-311518 19881209; JP 1989-144724 19890607.

AB A **Ag halide photog.** material which has improved photosensitivity comprises, on a support, an emulsion layer comprising a dispersion medium, **Ag halide**

grains, and a pendant-type compd. comprising sensitizing dye and antifoggant functional groups which are directly bonded via substituent groups or bonded via a divalent linking group. The substituent groups are selected from the group consisting of OH, halogens, CN, carboxy, methylenedioxy, and alkyl, aryl, alkoxy, aryloxy, alkylthio, arylthio, acyl, and alkoxy carbonyl groups. The linking group comprises  $\geq 2$  C atoms and is selected from the group consisting of alkylene, arylene, alkenylene, SO<sub>2</sub>, SO, O, S, CO, and NR (R = H, alkyl, or aryl).

IT 131579-92-5 131579-93-6 131579-94-7  
131579-96-9 131602-51-2

(photog. sensitizer, with antifoggant function groups)

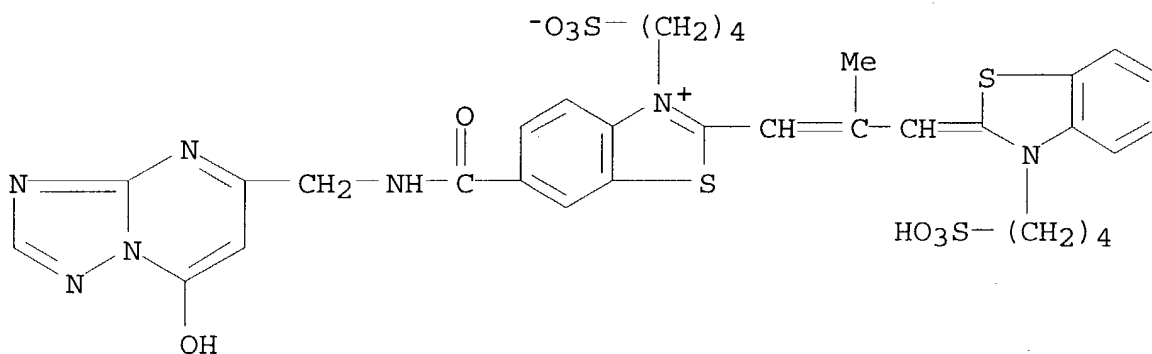
RN 131579-92-5 HCA

CN Benzothiazolium, 6-[[[(7-hydroxy[1,2,4]triazolo[1,5-a]pyrimidin-5-yl)methyl]amino]carbonyl]-2-[2-methyl-3-[3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]-1-propenyl]-3-(4-sulfobutyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 131579-91-4

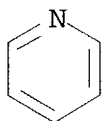
CMF C33 H35 N7 O8 S4



CM 2

CRN 110-86-1

CMF C5 H5 N



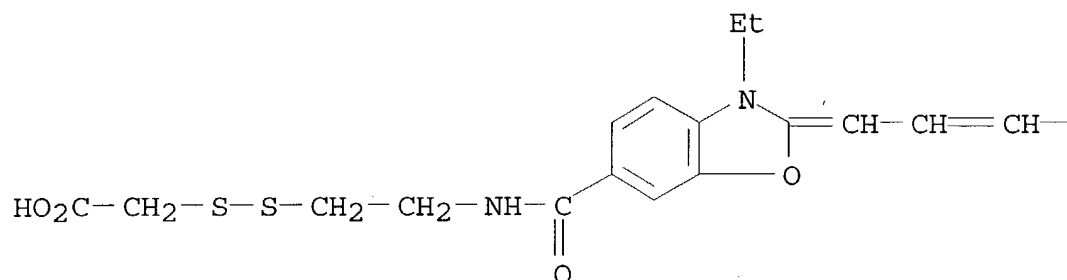
RN 131579-93-6 HCA

CN Benzoxazolium, 6-[[[2-[(carboxymethyl)dithio]ethyl]amino]carbonyl]-2-[3-[6-[[[2-[(carboxymethyl)dithio]ethyl]amino]carbonyl]-3-ethyl-2(3H)-benzoxazolylidene]-1-propenyl]-3-ethyl-, chloride (9CI) (CA

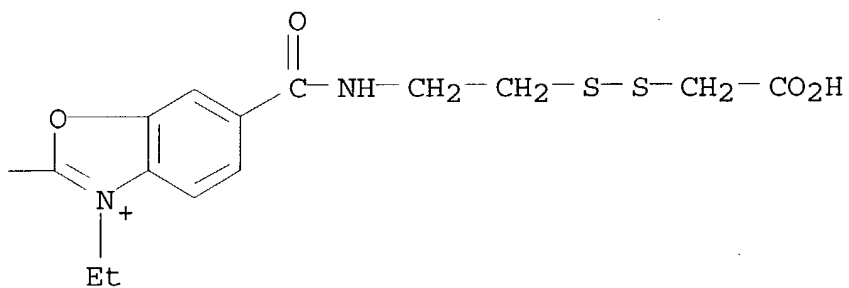


INDEX NAME)

PAGE 1-A

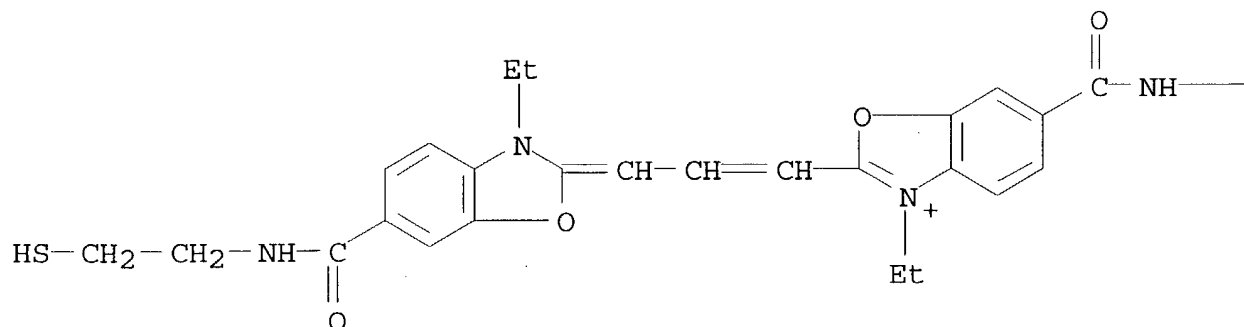
● Cl<sup>-</sup>

PAGE 1-B



RN 131579-94-7 HCA  
 CN Benzoxazolium, 3-ethyl-2-[3-[3-ethyl-6-[[ (2-mercaptoethyl) amino] carbonyl] -2 (3H) -benzoxazolylidene] -1-propenyl] -6-[[ (2-mercaptoethyl) amino] carbonyl] -, chloride (9CI) (CA INDEX NAME)

PAGE 1-A

● Cl<sup>-</sup>

PAGE 1-B

—CH<sub>2</sub>—CH<sub>2</sub>—SH

RN 131579-96-9 HCA

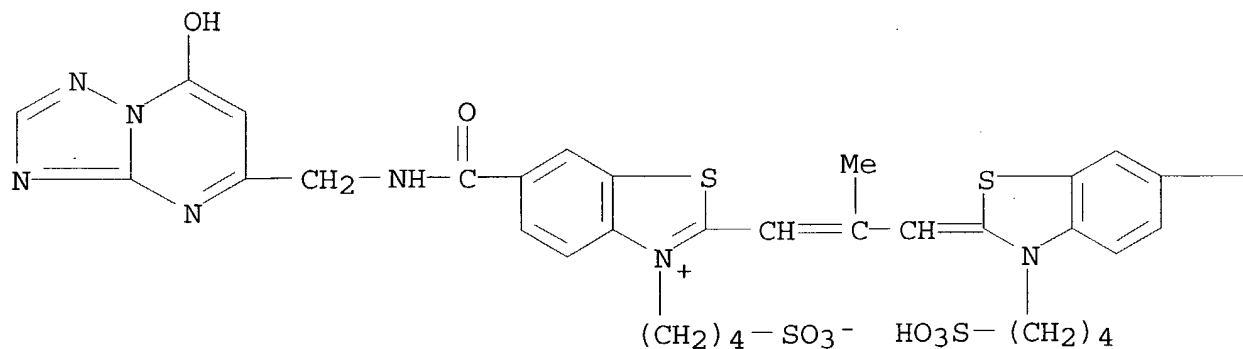
CN Benzothiazolium, 6-[[[(7-hydroxy[1,2,4]triazolo[1,5-a]pyrimidin-5-yl)methyl]amino]carbonyl]-2-[3-[6-[[[(7-hydroxy[1,2,4]triazolo[1,5-a]pyrimidin-5-yl)methyl]amino]carbonyl]-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]-2-methyl-1-propenyl]-3-(4-sulfobutyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

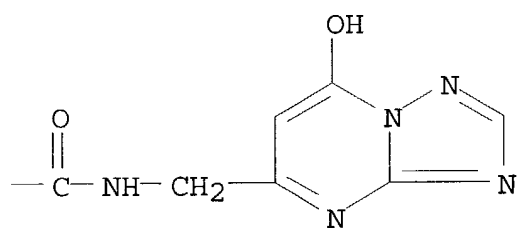
CRN 131579-95-8

CMF C40 H40 N12 O10 S4

PAGE 1-A



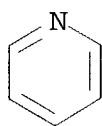
PAGE 1-B



CM 2

CRN 110-86-1

CMF C5 H5 N

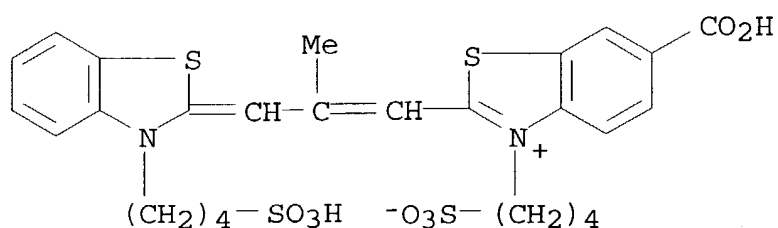


RN 131602-51-2 HCA  
 CN Benzo[thiazolium], 6-carboxy-2-[2-methyl-3-[3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]-1-propenyl]-3-(4-sulfobutyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 131602-50-1

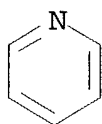
CMF C27 H30 N2 O8 S4



CM 2

CRN 110-86-1

CMF C5 H5 N



IC ICM G03C001-34

ICS G03C001-12

CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)ST sensitizer antifoggant pendant compd **photog**IT **Photographic** sensitizers

(contg. antifoggant functional groups)

IT 131579-92-5 131579-93-6 131579-94-7

131579-96-9 131602-51-2

(photog. sensitizer, with antifoggant function groups)

L44 ANSWER 19 OF 22 HCA COPYRIGHT 2003 ACS

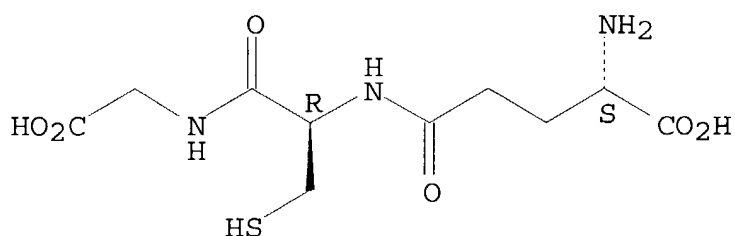
112:188791 The oxidation of gelatin. Moll, F. J. (Agfa-Gevaert A.-G.,  
Leverkusen, D-5090, Fed. Rep. Ger.). Photogr. Gelatin, Proc. IAG  
Conf., 5th, Meeting Date 1988, Volume 2, 281-91. Editor(s):  
Ammann-Brass, Hans; Pouradier, Jacques. Int. Arbeitsgem.  
Photogelatine: Fribourg, Switz. (English) 1989. CODEN: 56TEAA.

AB The oxidn. of gelatins is a highly complex process. Depending on  
the pH and the oxidizing agent, a variety of impurities present in  
the gelatin and different parts of the gelatin mol. can be oxidized.  
Relatively easily proceeds the oxidn. of inorg. impurities such as  
sulfite, nitrite and thiosulfate. The oxidn. of cysteine to cystine  
proceeds at low oxidn. potentials which, however, depend on the pH  
value. The reaction can even lead to cysteic acid. If this takes  
place, according to the prevailing oxidn. potential also methionine  
should be oxidized to methionine sulfoxide. The thioether  
methionine requires at pH 5-6 a higher electrode potential as  
cysteine. Neither treatment with H<sub>2</sub>O<sub>2</sub> even at pH 12, nor a  
treatment with peroxy acetic acid can affect, carbohydrates. In  
order to oxidize them, periodic acid must be employed. Oxidn.

changes the **photog.** properties of the gelatin. The chem. ripening is inhibited and grain growth is accelerated. In this respect, peroxyacetic acid acts as a much more powerful oxidant than H<sub>2</sub>O<sub>2</sub>. Also, oxidn. destroys a component responsible for grain growth inhibition.

- IT 70-18-8, Glutathione, reactions  
 (oxidn. of, in **photog.** gelatin, growth of **silver halide** grains in relation to)  
 RN 70-18-8 HCA  
 CN Glycine, L-.gamma.-glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



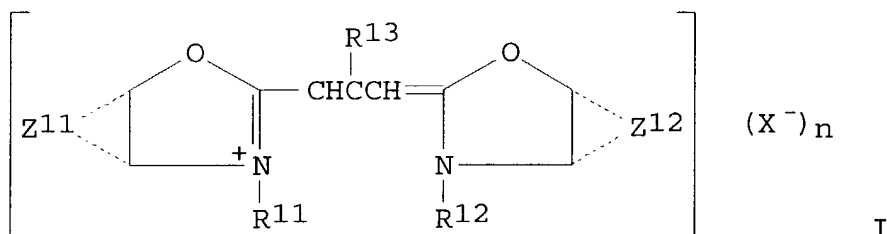
- CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 45  
 ST oxidn gelatin impurity **photog**  
 IT Oxidation  
 (of **photog.** gelatin, growth of **silver halide** microcrystals in relation to)  
 IT **Photographic** emulsions  
 (oxidn. of gelatin for, growth of **silver halide** microcrystals and sensitivity in relation to)  
 IT Aldehydes, reactions  
 Carbohydrates and Sugars, reactions  
 (oxidn. of impurities of, in **photog.** gelatin)  
 IT 50-00-0, Formaldehyde, analysis  
 (detn. of aldehydes as, in oxidn. of **photog.** gelatin)  
 IT 59-23-4, Galactose, analysis  
 (detn. of carbohydrates as, in oxidized **photog.** gelatin)  
 IT 79-21-0, Peroxyacetic acid 7722-84-1, Hydrogen peroxide, reactions  
 (oxidn. of **photog.** gelatin by, growth of **silver halide** grains in relation to)  
 IT 52-90-4, Cysteine, reactions 63-68-3, Methionine, reactions  
 70-18-8, Glutathione, reactions  
 (oxidn. of, in **photog.** gelatin, growth of **silver halide** grains in relation to)

L44 ANSWER 20 OF 22 HCA COPYRIGHT 2003 ACS

112:168957 **Silver halide photographic**  
 material containing sensitizer dye and nitrogen-containing heterocyclic derivative with mercapto group. Okumura, Mitsuhiro;

Chino, Shigeo (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 01197740 A2 19890809 Heisei, 22 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-22600 19880201.

GI



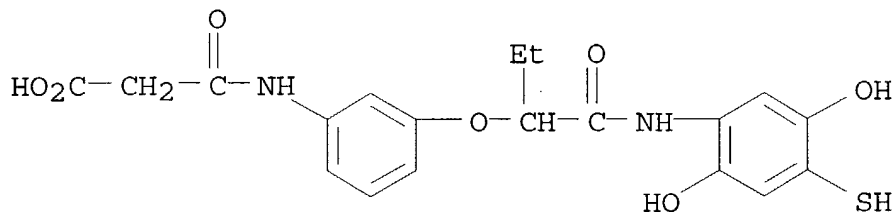
AB In the **photog.** material having a **photog.** constitutional layer (including **Ag halide** emulsion layers), .gtoreq.1 of emulsion layers contains **Ag halide** grains (contg. **AgCl** .gtoreq.80 mol.%) sensitized by a sensitizer dye I [Z11, Z12 = group necessary to form a benzene or naphthalene ring with a substituent, such as halogen, aryl, alkyl, or alkoxy; R11, R12 = alkyl, alkenyl, aryl; R13 = H, Cl-3 alkyl; X = anion; n = 1, 0], Y[SL1(J1)k(L2)l(Z)m(L3)n(J2L4)p(G)q]r [L1-L4 = hydrocarbon group which may have a divalent substituent; J1, J2 = O, COO, OCO, CONR1, NR1CO, SO2NR1, NR1SO2, NR1CONR2, SO2, N:N, NR1, CO; Y = H, divalent bond, amidino; Z = heterocyclic group; G = sulfonic acid, carboxyl, phosphoric acid; R1, R2 = H, alkyl, aryl; k, l, m, n = 0-2; p = 0-4; q = 1-4; r = 1-2; when G = carboxyl, m = 1-2; when Y = divalent bond, r = 2], and N-contg. heterocyclic deriv. with a mercapto group. The **photog.** material can be used for rapid processing. Storage stability of emulsion can be improved.

IT 126325-22-2

(**photog.** emulsion layer contg., for improving storage stability)

RN 126325-22-2 HCA

CN Propanoic acid, 3-[[3-[1-[[[2,5-dihydroxy-4-mercaptophenyl]amino]carbonyl]propoxy]phenyl]amino]-3-oxo- (9CI)  
(CA INDEX NAME)

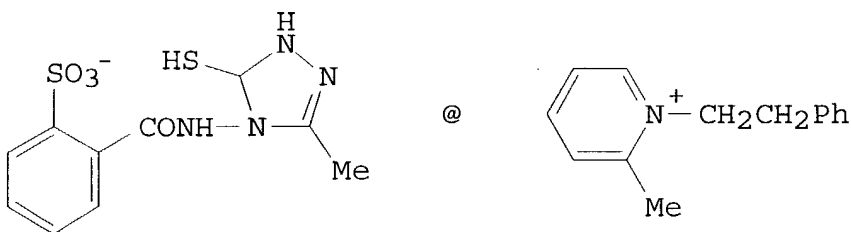


IC ICM G03C001-18

- ICS G03C001-02; G03C001-34
- CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST cyanine sensitizer dye **photog**; mercapto fog inhibitor  
**photog**
- IT **Photographic** paper  
(contg. cyanine sensitizer dye and mercapto fog inhibitor and  
additive for improving processability and storage stability of  
emulsion)
- IT **Photographic** sensitizers  
(dye, cyanine, emulsion layer contg.)
- IT **Photographic** fog inhibitors  
(emulsion layer contg.)
- IT Thiols, uses and miscellaneous  
(**photog**. fog inhibitor)
- IT 3375-50-6 17636-11-2 25985-59-5 121680-12-4  
126325-22-2  
(**photog**. emulsion layer contg., for improving storage  
stability)
- IT 86-93-1 2382-96-9, 2(3H)-Benzoxazolethione 5331-91-9  
13980-76-2 38942-50-6 66473-10-7 81188-34-3 115948-45-3  
126325-23-3  
(**photog**. fog inhibitor)
- IT 18360-25-3 56133-67-6 101559-61-9 108831-31-8  
(**photog**. sensitizer dye)

L44 ANSWER 21 OF 22 HCA COPYRIGHT 2003 ACS  
110:182736 Fog-inhibition compounds for use in **silver**  
**halide photography**. Piet, Kok; Jos, Vaes  
(Agfa-Gevaert N. V., Belg.). Research Disclosure, 297, 45-50  
(English) 1989. CODEN: RSDSBB. ISSN: 0374-4353. OTHER SOURCES:  
MARPAT 110:182736.

GI



I

- AB A complex onium additive is described which combines fog inhibiting  
with other useful **photog**. properties. The additive  
consists of mercapto-azole (fog inhibitor) anion and onium cation  
(development activator), and can be incorporated into a hydrophilic,  
or **Ag halide** emulsion layer at the  
**photog**.-element. Thus, a poly(ethylene terephthalate)  
support was coated with **AgCl** gelatin emulsion layer contg.

I, overcoated with a protective layer, imagewise exposed, and developed while in contact with the **image** receptor element. The max. d. (Dmax) and .gamma. (gradation values measured from the characteristic curve over an exposure of log It = 0.6 starting from a d. 0.7 above fog) were 1.68 and 2.11 resp. vs. 1.62 and 1.81 for I-free sample.

IT 119789-46-7 120171-08-6  
(photog. fog-inhibiting compd.)

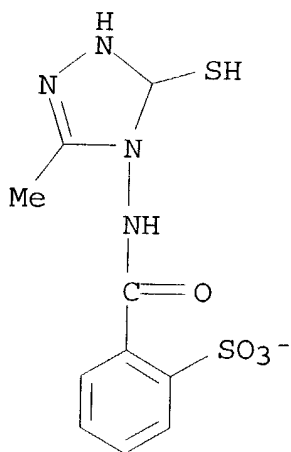
RN 119789-46-7 HCA

CN Pyridinium, 1-(2-phenylethyl)-, salt with 2-[[[(1,5-dihydro-5-mercapto-3-methyl-4H-1,2,4-triazol-4-yl)amino]carbonyl]benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 119789-45-6

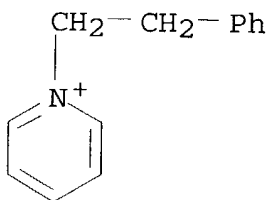
CMF C10 H11 N4 O4 S2



CM 2

CRN 46345-86-2

CMF C13 H14 N



RN 120171-08-6 HCA

CN Pyridinium, 2-methyl-1-(2-phenylethyl)-, salt with 2-[[[(1,5-dihydro-5-mercapto-3-methyl-4H-1,2,4-triazol-4-

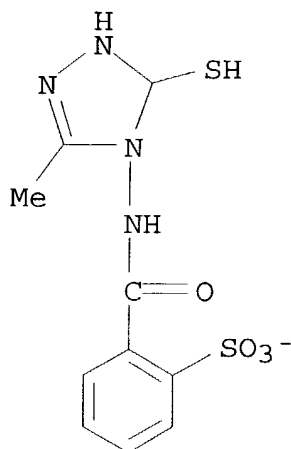


yl)amino]carbonyl]benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 119789-45-6

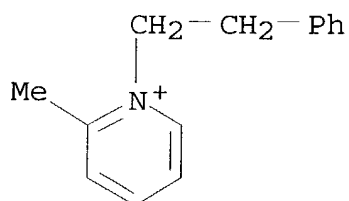
CMF C10 H11 N4 O4 S2



CM 2

CRN 51728-38-2

CMF C14 H16 N



- CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST fog inhibitor onium complex **photog**; mercaptoazole onium  
complex **photog**
- IT **Photographic** development  
(mercapto-azo anion and onium cation additive combining fog  
inhibiting properties with activation of)
- IT **Photographic** fog inhibitors  
(mercapto-azo anion and onium cation complex, combining fog  
inhibiting action with development activation)
- IT 119775-08-5  
(for **photog**. applications, prepn. of,)
- IT 29871-24-7P 32022-92-7P  
(**photog**. fog inhibiting compd. prepd. from reaction of)

IT 119789-46-7 120171-08-6  
(**photog.** fog-inhibiting compd.)

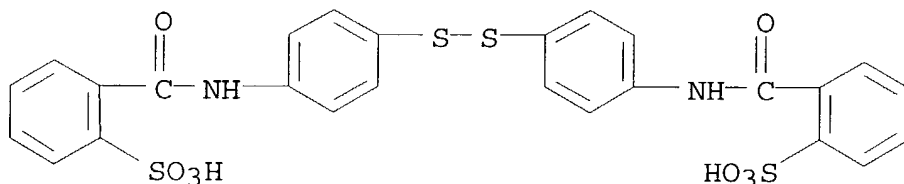
L44 ANSWER 22 OF 22 HCA COPYRIGHT 2003 ACS  
79:47808 Lithographic emulsions for high-temperature development.  
Hofman, Emiel Alexander; Berendsen, Jules Robert; Pollet, Robert  
Joseph (Agfa Gevaert A. G.). Ger. Offen. DE 2244916  
19730322, 19 pp. (German). CODEN: GWXXBX. APPLICATION: DE  
1972-2244916 19720913.

AB The fog during development of lith emulsions (>50% **AgCl**,  
>5% **AgBr**, <1% **AgI**) with lith type or  
Metol-hydroquinone developers at >30.degree. is reduced by addn.  
prior to coating of 5-1000 mg/mole **Ag halides** of  
bis- alkylene or bis-arylene disulfides with solubilizing SO<sub>3</sub>H or  
CO<sub>2</sub>H groups. Thus, 20 mg of (p-NaSO<sub>3</sub>C<sub>6</sub>H<sub>4</sub>S)<sub>2</sub> reduced the fog of an  
emulsion developed for 4 min in a developer contg. hydroquinone,  
HCHONaHS- O<sub>3</sub>, and a polyethylene glycol-Et<sub>3</sub>PO<sub>4</sub> condensate as  
accelerator, of pH 10 and at 32.degree. from 0.24 to 0.08.

IT 38650-26-9  
(**photog.** fog inhibitor, for lithog. emulsions)

RN 38650-26-9 HCA

CN Benzenesulfonic acid, 2,2'-[dithiobis(4,1-  
phenyleneiminocarbonyl)]bis-, disodium salt (9CI) (CA INDEX NAME)

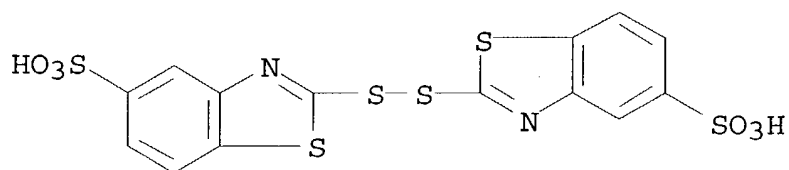


● 2 Na

IT 42726-53-4P  
(prepn. of)

RN 42726-53-4 HCA

CN 5-Benzothiazolesulfonic acid, 2,2'-dithiobis-, disodium salt (9CI)  
(CA INDEX NAME)



● 2 Na

IC G03C  
 CC 74-2 (Radiation Chemistry, Photochemistry, and  
 Photographic Processes)  
 IT **Photographic** fog inhibitors  
 (bisalkylene and bisarylene disulfides as, for lithog. emulsions)  
 IT 1119-62-6 27738-87-0 27738-88-1 **38650-26-9**  
 38650-27-0  
 (photog. fog inhibitor, for lithog. emulsions)  
 IT 7303-56-2P 42579-79-3P 42579-80-6P 42579-81-7P 42579-82-8P  
 42579-83-9P **42726-53-4P**  
 (prepn. of)

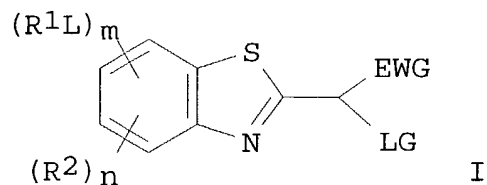
=> d l42 1-10 cbib abs hitstr hitind

L42 ANSWER 1 OF 10 HCA COPYRIGHT 2003 ACS

135:264491 **Silver halide photographic**

material containing yellow coupler and **image** forming  
 method. Ogasawara, Atsushi; Uchida, Osamu (Fuji Photo Film Co.,  
 Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001264947 A2  
**20010928**, 39 pp. (Japanese). CODEN: JKXXAF. APPLICATION:  
 JP 2000-82505 20000323.

GI



AB The material contains .gtoreq.1 coupler I [EWG = CN, carbamoyl,  
 alkoxycarbonyl; LG = a group releasing by coupling with a color  
 developer oxidn. product; L = linkage, bivalent linkage; R1 = group  
 contg. .gtoreq.1 of CO2H, CONHSO2R3, SO2NHR3, SO2NHCOR3, NHSO2R3,  
 SH, and OH; m = 1-4; n = 0-(4-m)]. **Images** are formed by

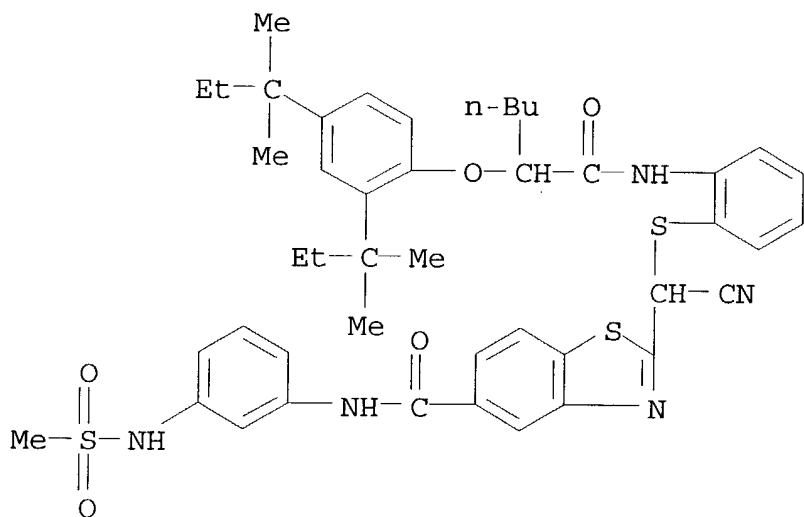
(a) heat-developing it, (b) developing it under alkali generated from a poorly sol. metal salt and its complex-forming agent, or (c) developing it by extending an alk. processing soln. to it. The material shows improved color development and storage stability.

IT 361483-54-7 361483-55-8 361483-56-9  
361483-57-0

(benzothiazole deriv. photog. yellow coupler)

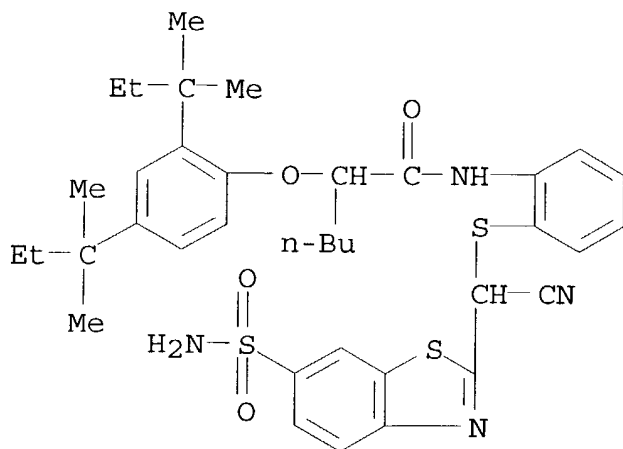
RN 361483-54-7 HCA

CN 5-Benzothiazolecarboxamide, 2-[[[2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]phenyl]thio]cyanomethyl]-N-[3-[(methylsulfonyl)amino]phenyl]- (9CI) (CA INDEX NAME)



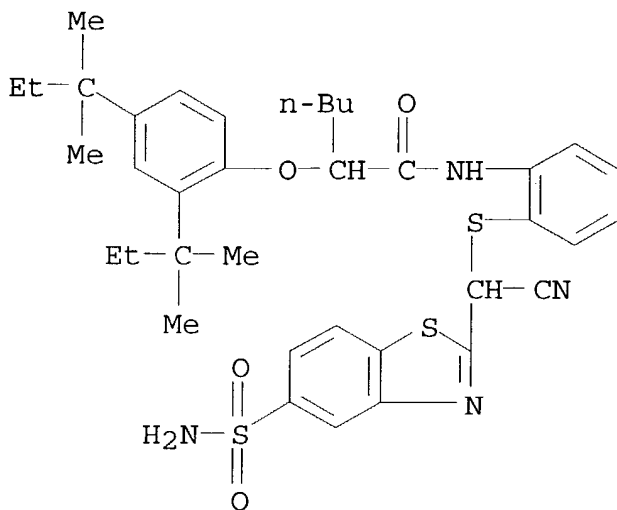
RN 361483-55-8 HCA

CN Hexanamide, N-[2-[[[6-(aminosulfonyl)-2-benzothiazolyl]cyanomethyl]thio]phenyl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)



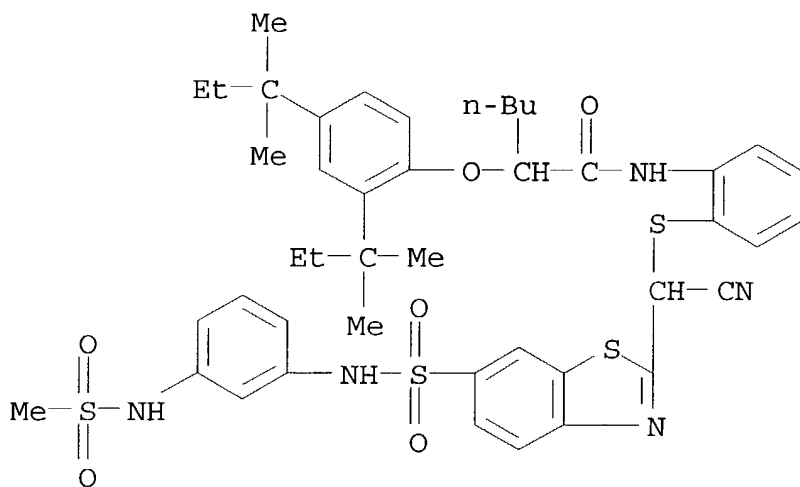
RN 361483-56-9 HCA

CN Hexanamide, N-[2-[[[5-(aminosulfonyl)-2-benzothiazolyl]cyanomethyl]thio]phenyl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-(9CI) (CA INDEX NAME)



RN 361483-57-0 HCA

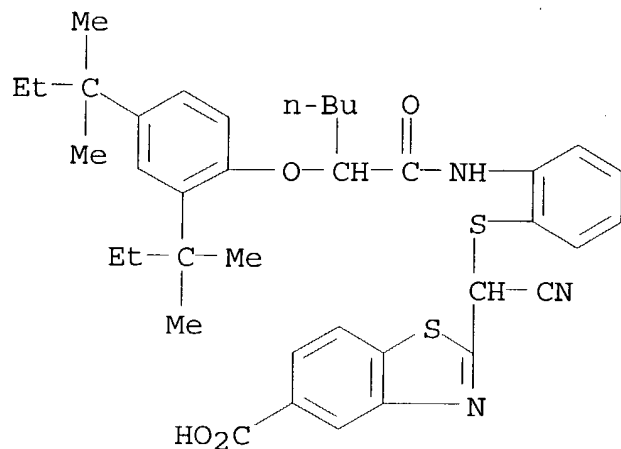
CN Hexanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[2-[[[cyano[6-[[[3-[(methylsulfonyl)amino]phenyl]amino]sulfonyl]-2-benzothiazolyl]methyl]thio]phenyl]]-(9CI) (CA INDEX NAME)



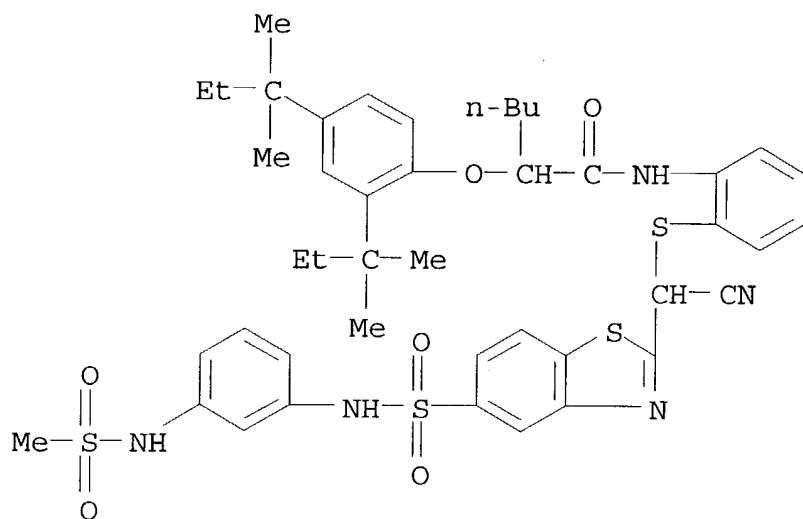
IT 361483-53-6P 361483-58-1P  
(benzothiazole deriv. photog. yellow coupler)

RN 361483-53-6 HCA

CN 5-Benzothiazolecarboxylic acid, 2-[[[2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]phenyl]thio]cyanomethyl]]-(9CI) (CA INDEX NAME)

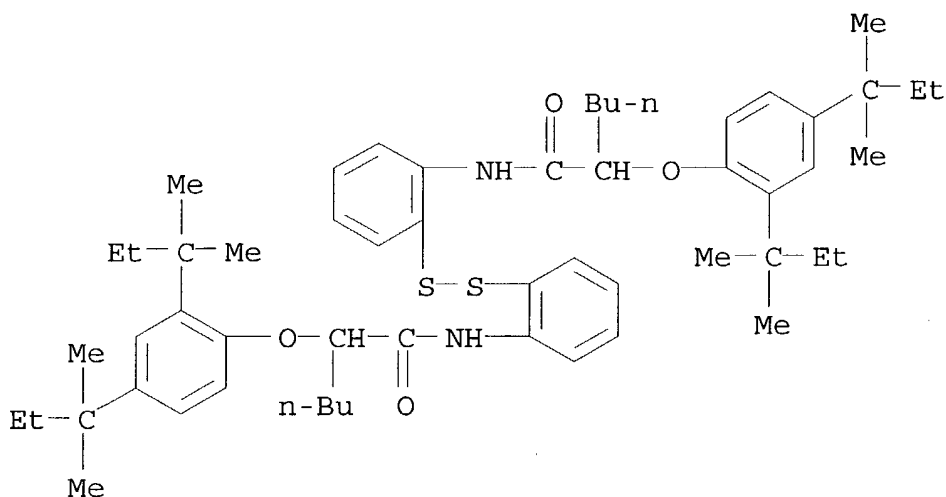


RN 361483-58-1 HCA  
 CN Hexanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[2-[[cyano[5-[[3-[(methylsulfonyl)amino]phenyl]amino]sulfonyl]-2-benzothiazolyl]methyl]thio]phenyl]- (9CI) (CA INDEX NAME)



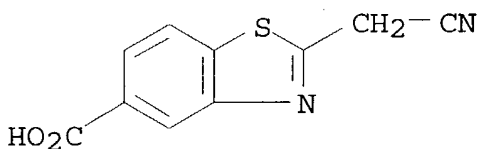
IT 156146-02-0P 224947-53-9P 361483-61-6P  
 (prepn. of **benzothiazole** deriv. **photog.**  
 yellow coupler)

RN 156146-02-0 HCA  
 CN Hexanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)



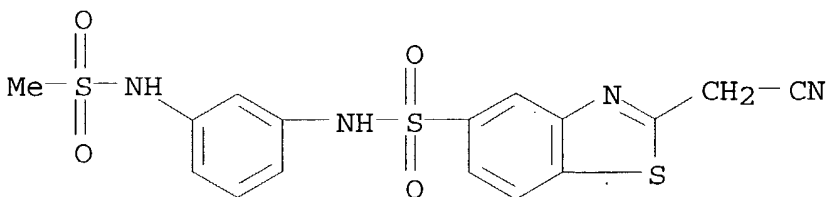
RN 224947-53-9 HCA

CN 5-Benzothiazolecarboxylic acid, 2-(cyanomethyl)- (9CI) (CA INDEX NAME)



RN 361483-61-6 HCA

CN 5-Benzothiazolesulfonamide, 2-(cyanomethyl)-N-[3-[(methylsulfonyl)amino]phenyl]- (9CI) (CA INDEX NAME)



IC ICM G03C008-40

ICS G03C008-10

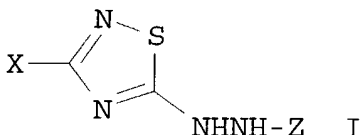
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **benzothiazole** deriv **photog** yellow coupler; heat developable **photog** film yellow coupler; diffusion transfer **photog** film yellow couplerIT Yellow couplers  
(**benzothiazole** deriv. **photog.** yellow coupler)

- IT Diffusion-transfer **photographic** films  
(**benzothiazole** deriv. yellow coupler for  
diffusion-transfer **photog.** film)
- IT **Photographic** films  
(heat-developable; **benzothiazole** deriv. yellow coupler  
for heat-developable **photog.** film)
- IT 361483-54-7 361483-55-8 361483-56-9  
361483-57-0  
(**benzothiazole** deriv. **photog.** yellow coupler)
- IT 361483-53-6P 361483-58-1P  
(**benzothiazole** deriv. **photog.** yellow coupler)
- IT 49706-71-0P 156146-02-0P 224947-53-9P  
361483-60-5P 361483-61-6P  
(prepn. of **benzothiazole** deriv. **photog.**  
yellow coupler)
- IT 96-99-1, 3-Nitro-4-chlorobenzoic acid 109-77-3, Malononitrile  
1141-88-4 22868-13-9, Sodium sulfide (Na<sub>2</sub>S<sub>2</sub>) 63059-55-2  
361483-59-2  
(prepn. of **benzothiazole** deriv. **photog.**  
yellow coupler)

L42 ANSWER 2 OF 10 HCA COPYRIGHT 2003 ACS  
135:129516 Heat-developable color **photographic** material  
showing good discrimination and diffusion transfer color  
**imaging** method using the same. Kamosaki, Toru; Naruse,  
Hideaki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho  
JP 2001201834 A2 **20010727**, 62 pp. (Japanese). CODEN:  
JKXXAF. APPLICATION: JP 2000-12229 20000120.

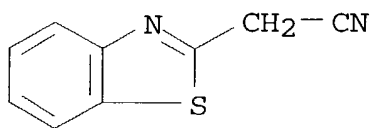
GI



- AB The title **photog.** material contains **photog.**  
**Ag halide** grains, a color developing agent,  
coupler, dye-releasing agent, dye having absorption at 600-900 nm,  
and binder, wherein the color developing agent is represented by I  
(X = halo, alkyl, aryl, heterocycle, alkylthio, arylthio, etc.; Z =  
carbamoyl, acyl, alkoxycarbonyl, etc.), the dye-releasing agent is  
represented by (Dye-Y)<sub>n</sub>-Z [Dye = dye, dye precursor; Y = single  
bond, connecting group; Z = group capable of effecting on  
diffusibility; n = 1, 2], and the **Ag halide**  
grain shows a spectral sensitivity peak at .gtoreq.700 nm.
- IT **56278-50-3, 2-Benzothiazoleacetonitrile**  
(prepn. of yellow coupler in heat-developable color  
**photog.** material showing good discrimination)
- RN 56278-50-3 HCA



CN 2-Benzothiazoleacetonitrile (9CI) (CA INDEX NAME)

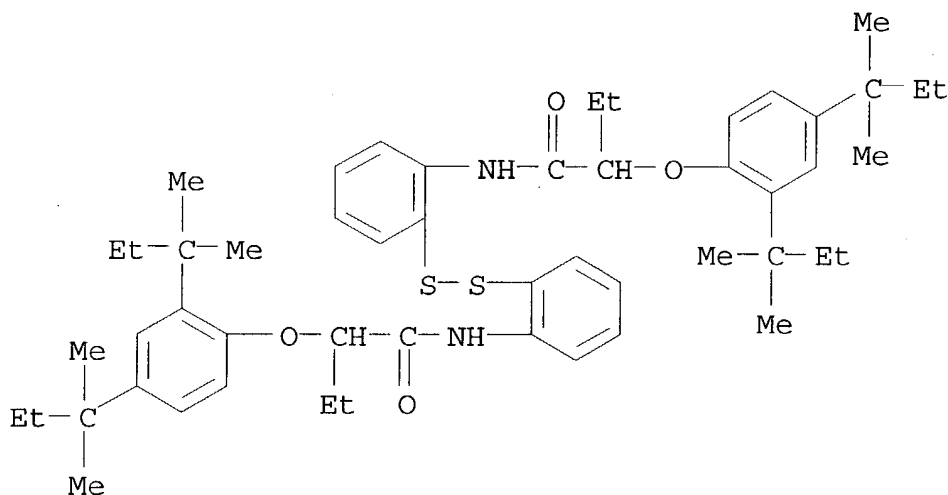


IT 156146-01-9P

(prepn. of yellow coupler in heat-developable color  
**photog.** material showing good discrimination)

RN 156146-01-9 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

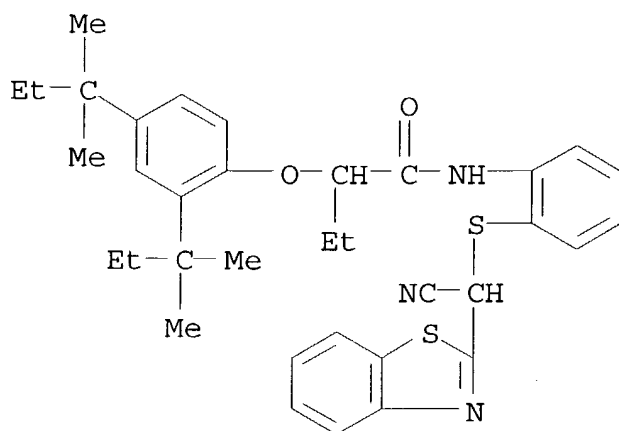


IT 307930-51-4P

(yellow coupler in heat-developable color **photog.**  
material showing good discrimination)

RN 307930-51-4 HCA

CN Butanamide, N-[2-[(2-benzothiazolylcyanomethyl)thio]phenyl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

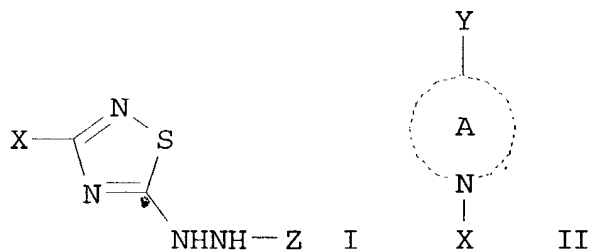


- IC ICM G03C008-40  
ICS G03C008-40
- CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST heat developable color **photog** material diffusion transfer  
development; photothermog **photoimaging** material diffusion  
transfer color **imaging**
- IT **Photographic** developers  
(diffusion-transfer; heat-developable color **photog**.  
material showing good discrimination and diffusion transfer color  
**imaging** method using the same)
- IT **Photoimaging** materials  
Photothermographic copying  
(heat-developable color **photog**. material showing good  
discrimination and diffusion transfer color **imaging**  
method using the same)
- IT **Photographic** emulsions  
**Photographic** films  
**Photographic** paper  
(heat-developable; heat-developable color **photog**.  
material showing good discrimination and diffusion transfer color  
**imaging** method using the same)
- IT 321124-93-0P  
(color developing agent in heat-developable color **photog**  
. material showing good discrimination)
- IT 351026-51-2  
(cyan DDR coupler in heat-developable color **photog**.  
material showing good discrimination)
- IT 224579-47-9  
(cyan-dye-releasing compd. in heat-developable color  
**photog**. material showing good discrimination)
- IT 324008-56-2  
(magenta coupler in heat-developable color **photog**.  
material showing good discrimination)
- IT 594-42-3 7803-57-8 56406-50-9 74856-27-2, 7-Pentadecanamine

- (prepn. of color developing agent in heat-developable color **photog.** material showing good discrimination)
- IT 72802-02-9P 90110-85-3P 321124-92-9P  
(prepn. of color developing agent in heat-developable color **photog.** material showing good discrimination)
- IT 75-36-5, Acetylchloride 103-16-2, Hydroquinonemonobenzyl ether 26272-90-2, Hexadecyl chloroformate  
(prepn. of coupler in heat-developable color **photog.** material showing good discrimination)
- IT 171551-92-1P 301647-24-5P 301647-25-6P 301647-26-7P  
(prepn. of coupler in heat-developable color **photog.** material showing good discrimination)
- IT 301310-06-5P  
(prepn. of coupler in heat-developable color **photog.** material showing good discrimination)
- IT 1141-88-4 7791-25-5, Sulfuryl chloride 40567-16-6, 2-(2,4-Di-tert-amylphenoxy)butanoyl chloride 56278-50-3, 2-Benzothiazoleacetoneitrile  
(prepn. of yellow coupler in heat-developable color **photog.** material showing good discrimination)
- IT 156146-01-9P  
(prepn. of yellow coupler in heat-developable color **photog.** material showing good discrimination)
- IT 307930-51-4P  
(yellow coupler in heat-developable color **photog.** material showing good discrimination)

L42 ANSWER 3 OF 10 HCA COPYRIGHT 2003 ACS  
135:99776 Color diffusion-transfer **photographic** materials and formation of **images**. Taguchi, Keiichi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001183786 A2 20010706, 57 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-364903 19991222.

GI



AB The materials comprise layers for transfer and fixing of diffusive dyes, formed by exposure and development of a photosensitive layer. In the materials the photosensitive layers contain photosensitive **Ag halide**, binders, and compds. which generate or form diffusive dyes by reaction with thiadiazole developing agents I

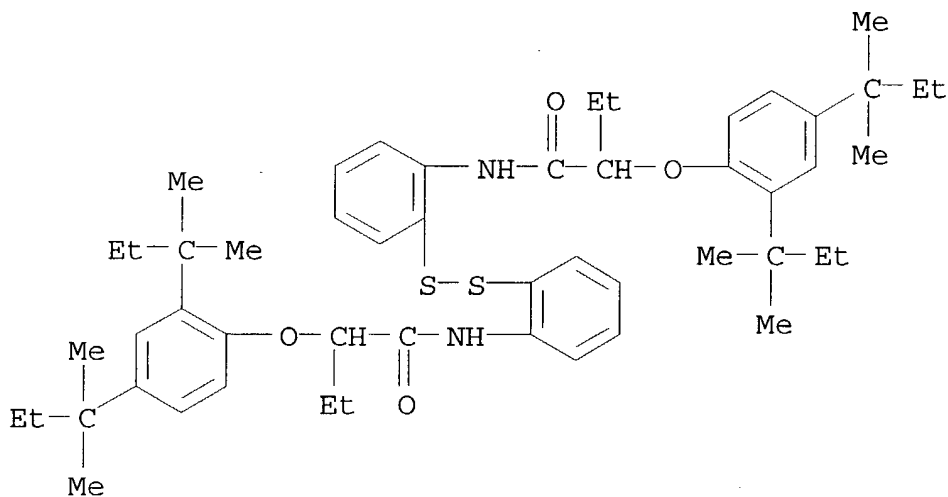
(X = halogen, alkyl, aryl, heterocycle, alkylthio, arylthio, heterocyclothio, alkylsulfinyl, arylsulfinyl, alkylsulfonyl, arylsulfonyl, sulfamoyl; Z = carbamoyl, acyl, alkoxycarbonyl, aryloxycarbonyl, sulfonyl, sulfamoyl) and the fixing layer contains mordant polymers and heterocyclic compds. II (A is .gtoreq.3-membered N-contg. nonarom. heterocycle; X = H, alkoxyl, aryloxy, oxyradical, OH, group forming (hydroxy)imino by hydrolysis; Y = group forming covalent bond with reactive group in binder). **Images** with excellent fastness are obtained.

IT 156146-01-9P

(color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)

RN 156146-01-9 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

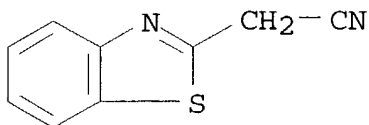


IT 56278-50-3, 2-Benzothiazoleacetonitrile

(color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)

RN 56278-50-3 HCA

CN 2-Benzothiazoleacetonitrile (9CI) (CA INDEX NAME)

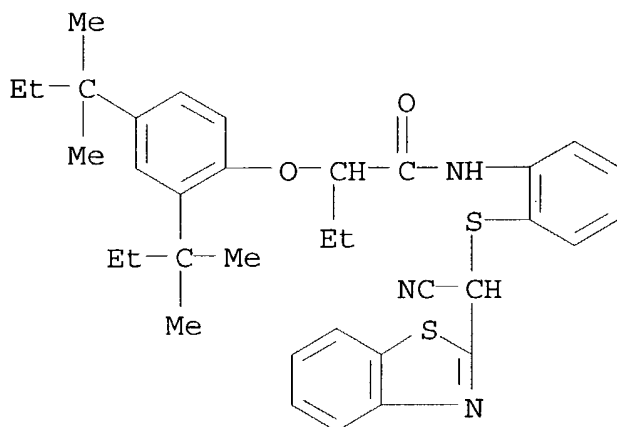


IT 307930-51-4P

(coupler; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)

RN 307930-51-4 HCA

CN Butanamide, N-[2-[(2-benzothiazolylcyanomethyl)thio]phenyl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-(9CI) (CA INDEX NAME)

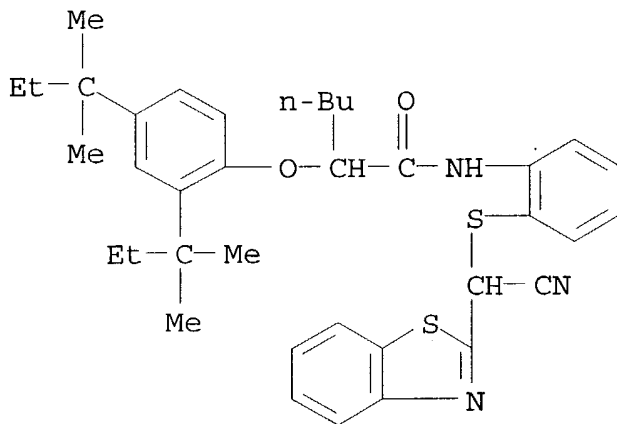


IT 308250-05-7

(coupler; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)

RN 308250-05-7 HCA

CN Hexanamide, N-[2-[(2-benzothiazolylcyanomethyl)thio]phenyl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-(9CI) (CA INDEX NAME)



IC ICM G03C008-40

ICS G03C008-40

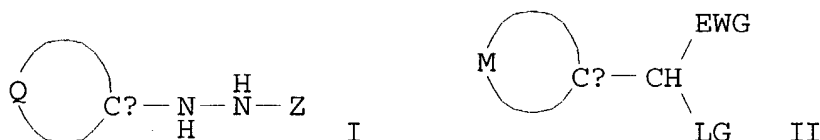
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST color diffusion transfer **photog** material; piperidine browning inhibitor diffusion transfer **photog**; thiadiazole developer color diffusion transfer **photog**IT **Photography**

- (color diffusion-transfer; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT Diffusion-transfer **photographic** films  
(color; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT **Photographic** couplers  
**Photographic** developers  
(diffusion-transfer; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 1796-19-6 21270-85-9 83868-59-1 205309-44-0 288105-23-7  
348603-36-1 348603-37-2 348603-38-3  
(browning inhibitor; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 72802-02-9P 74856-27-2P, 7-Pentadecanamine 90110-85-3P  
**156146-01-9P** 171551-92-1P 301647-24-5P 301647-25-6P  
301647-26-7P 321124-92-9P  
(color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 75-36-5, Acetyl chloride 103-16-2 594-42-3 1141-88-4  
3459-99-2 7791-25-5, Sulfuryl chloride 7803-57-8 26272-90-2  
40567-16-6 **56278-50-3**, 2-Benzothiazoleacetonitrile  
(color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 301310-06-5P **307930-51-4P**  
(coupler; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 301647-21-2 **308250-05-7** 324008-56-2  
(coupler; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 321124-93-0P  
(developer; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 321124-95-2 324008-65-3 348603-39-4  
(developer; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 103437-05-4  
(mordant polymer in fixing layer; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)

material containing color developer and coupler and **image** formation. Uchida, Osamu; Ishiwata, Yasuhiro; Katsumata, Taiji (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000321736 A2 **20001124**, 68 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-127299 19990507.

GI

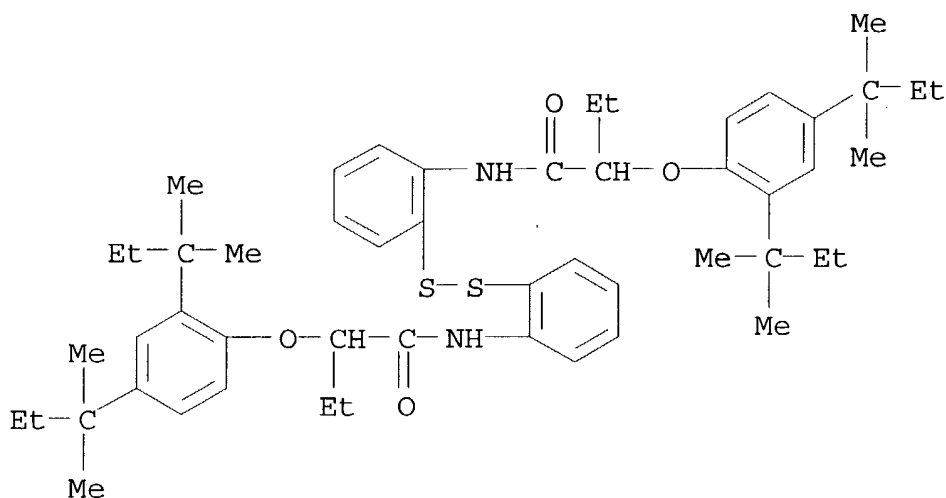


AB The material has a support and .gtoreq.1 hydrophilic colloid layer contg. .gtoreq.1 hydrazine color developer I (C.alpha. = carbons; Z = carbamoyl, acyl, alkoxy carbonyl, aryloxy carbonyl; Q = atoms required for forming an unsatd. ring with C.alpha.) and .gtoreq.1 coupler II (C.beta. = carbons; EWG = cyano, carbamoyl, alkoxy carbonyl; LG = group released by coupling-reaction with oxidn. product of developer; M = atoms required for forming 5-membered arom. heterocyclic ring with C.beta.). **Images** are formed by (a) heat-developing the material, (b) developing the material in the presence of alkali generated by poorly sol. metal salt and its complexing agent, or (c) developing the material with an alk. developer. The material showed improved color development to provide **images** with improved light, heat, and humidity stability.

IT **156146-01-9P**  
(intermediate; **silver halide** color  
**photog.** material involving hydrophilic layer contg.  
yellow coupler from)

RN 156146-01-9 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy] - (9CI) (CA INDEX NAME)



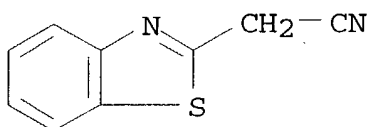
IT 56278-50-3, 2-Benzothiazoleacetonitrile

(silver halide color photog.

material involving hydrophilic layer contg. yellow coupler from)

RN 56278-50-3 HCA

CN 2-Benzothiazoleacetonitrile (9CI) (CA INDEX NAME)



IT 307930-51-4P

(yellow coupler; silver halide color

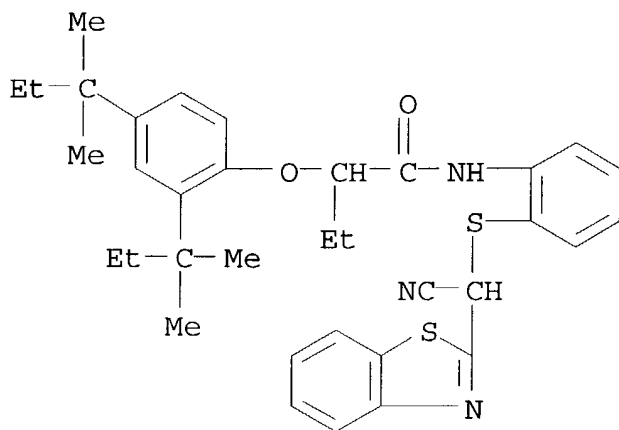
photog. material involving hydrophilic layer contg.

hydrazine developer and coupler)

RN 307930-51-4 HCA

CN Butanamide, N-[2-[(2-benzothiazolylcyanomethyl)thio]phenyl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

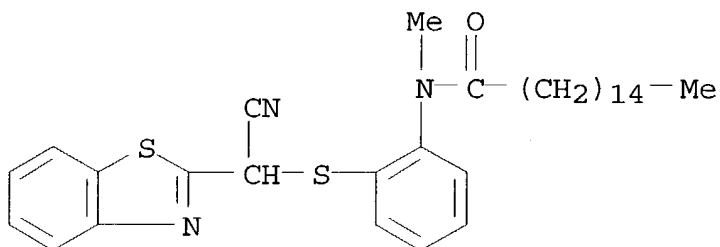




IT 307930-54-7 307930-57-0 307930-59-2  
 307930-61-6 307930-63-8 307930-67-2  
 307930-69-4 307930-71-8 307930-78-5  
 (yellow coupler; **silver halide** color  
**photog.** material involving hydrophilic layer contg.  
 hydrazine developer and coupler)

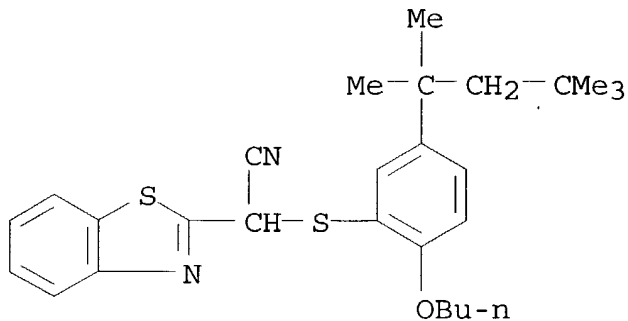
RN 307930-54-7 HCA

CN Hexadecanamide, N-[2-[(2-benzothiazolylcyanomethyl)thio]phenyl]-N-methyl- (9CI) (CA INDEX NAME)



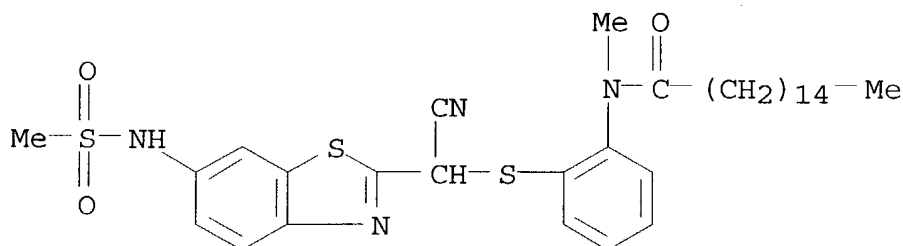
RN 307930-57-0 HCA

CN 2-Benzothiazoleacetonitrile, .alpha.-[[2-butoxy-5-(1,1,3,3-tetramethylbutyl)phenyl]thio]- (9CI) (CA INDEX NAME)



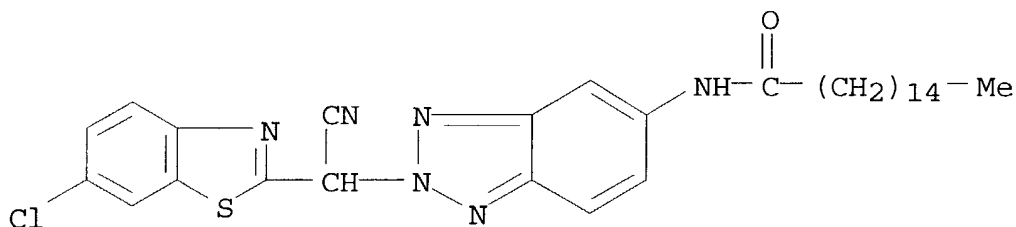
RN 307930-59-2 HCA

CN Hexadecanamide, N-[2-[[cyano[6-[(methylsulfonyl)amino]-2-benzothiazolyl]methyl]thio]phenyl]-N-methyl- (9CI) (CA INDEX NAME)



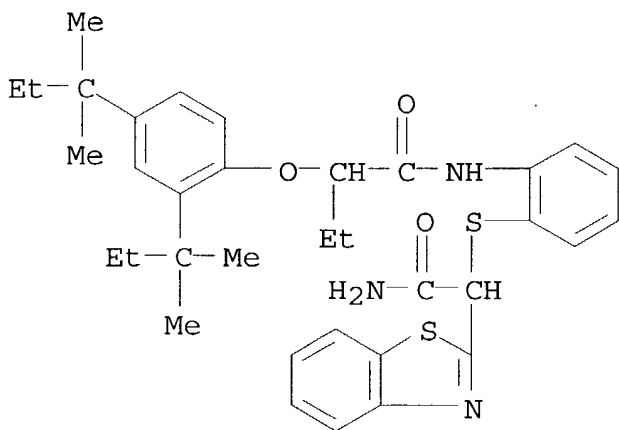
RN 307930-61-6 HCA

CN Hexadecanamide, N-[2-[(6-chloro-2-benzothiazolyl)cyanomethyl]-2H-benzotriazol-5-yl]- (9CI) (CA INDEX NAME)



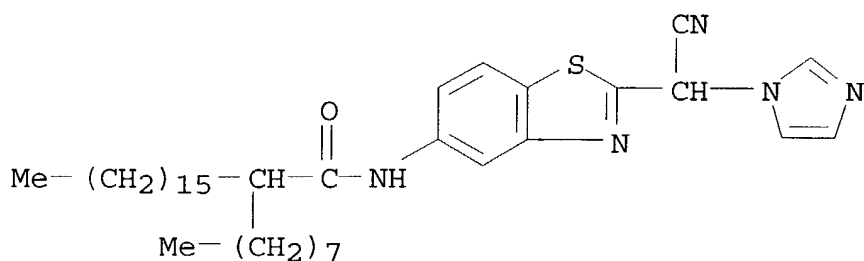
RN 307930-63-8 HCA

CN 2-Benzothiazoleacetamide, .alpha.-[[2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxobutyl]amino]phenyl]thio]- (9CI) (CA INDEX NAME)

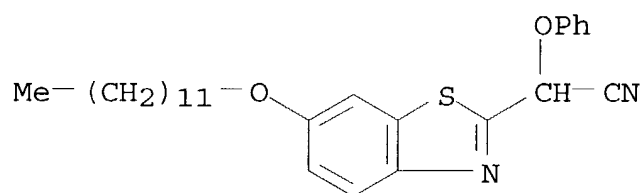


RN 307930-67-2 HCA

CN Octadecanamide, N-[2-(cyano-1H-imidazol-1-ylmethyl)-5-benzothiazolyl]-2-octyl- (9CI) (CA INDEX NAME)

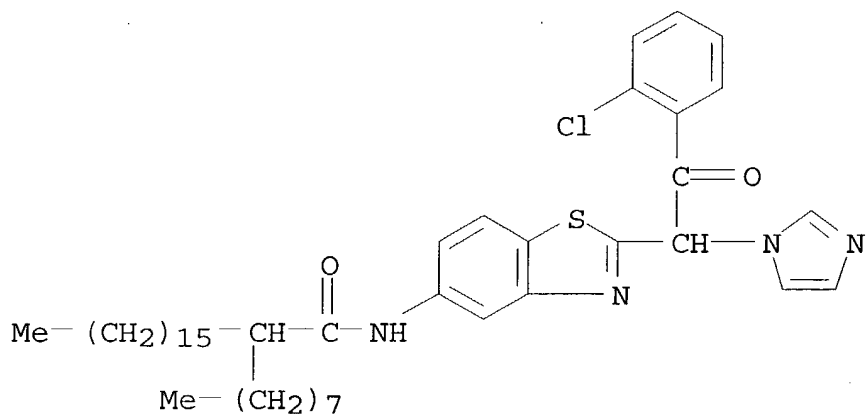


RN 307930-69-4 HCA

CN 2-Benzothiazoleacetone nitrile, 6-(dodecyloxy)-.alpha.-phenoxy- (9CI)  
(CA INDEX NAME)

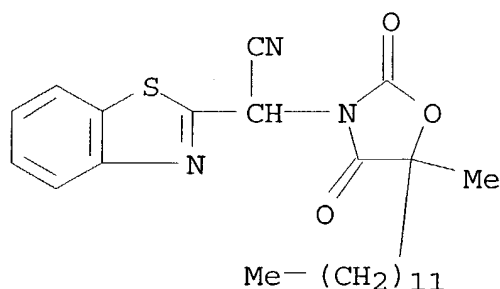
RN 307930-71-8 HCA

CN Octadecanamide, N-[2-[2-(2-chlorophenyl)-1-(1H-imidazol-1-yl)-2-oxoethyl]-5-benzothiazolyl]-2-octyl- (9CI) (CA INDEX NAME)



RN 307930-78-5 HCA

CN 2-Benzothiazoleacetone nitrile, .alpha.-(5-dodecyl-5-methyl-2,4-dioxo-3-oxazolidinyl)- (9CI) (CA INDEX NAME)



- IC ICM G03C007-392  
ICS G03C001-42; G03C007-36; G03C007-407; G03C007-46; G03C008-40
- CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST **silver halide color photog** material;  
**photog** developer hydrazine hydrophilic layer; coupler  
**silver halide photog** material; poorly  
sol metal salt **photog** development; complexing agent alk  
condition **photog** development; heat development  
**silver halide photog** emulsion
- IT Photothermographic copying  
(for **silver halide color photog**.  
material involving hydrophilic layer contg. hydrazine developer  
and coupler)
- IT **Photographic** developers  
**Photographic** development  
Yellow couplers  
(**silver halide color photog**.  
material involving hydrophilic layer contg. hydrazine developer  
and coupler)
- IT 301335-97-7P  
(developer; **silver halide color**  
**photog**. material involving hydrophilic layer contg.  
hydrazine developer and coupler)
- IT 182297-11-6 190184-77-1 307496-43-1 307930-44-5 307930-45-6  
307930-47-8  
(developer; **silver halide color**  
**photog**. material involving hydrophilic layer contg.  
hydrazine developer and coupler)
- IT 72802-02-9P 90110-85-3P 192711-97-0P 307496-55-5P  
(intermediate; **silver halide color**  
**photog**. material involving hydrophilic layer contg.  
hydrazine developer from)
- IT 156146-01-9P  
(intermediate; **silver halide color**  
**photog**. material involving hydrophilic layer contg.  
yellow coupler from)
- IT 594-42-3P  
(**silver halide color photog**.  
material involving hydrophilic layer contg. hydrazine developer

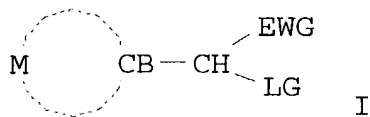
- from)
- IT 302-01-2, Hydrazine, reactions 56406-50-9 61053-26-7  
(**silver halide color photog.**  
material involving hydrophilic layer contg. hydrazine developer  
from)
- IT 1141-88-4 40567-16-6 **56278-50-3**, 2-  
**Benzothiazoleacetone nitrile**  
(**silver halide color photog.**  
material involving hydrophilic layer contg. yellow coupler from)
- IT **307930-51-4P**  
(yellow coupler; **silver halide color**  
**photog.** material involving hydrophilic layer contg.  
hydrazine developer and coupler)
- IT 307930-53-6 **307930-54-7** 307930-55-8 307930-56-9  
**307930-57-0 307930-59-2 307930-61-6**  
**307930-63-8 307930-65-0 307930-67-2**  
**307930-69-4 307930-71-8 307930-73-0**  
307930-74-1 307930-76-3 **307930-78-5** 307930-79-6  
307930-83-2  
(yellow coupler; **silver halide color**  
**photog.** material involving hydrophilic layer contg.  
hydrazine developer and coupler)

L42 ANSWER 5 OF 10 HCA COPYRIGHT 2003 ACS

133:367806 **Silver halide color photographic**

material containing specific coupler and **image** formation  
using same. Uchida, Osamu; Ishiwata, Yasuhiro; Katsumata, Taiji  
(Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP  
2000321732 A2 **20001124**, 19 pp. (Japanese). CODEN:  
JKXXAF. APPLICATION: JP 1999-127298 19990507.

GI



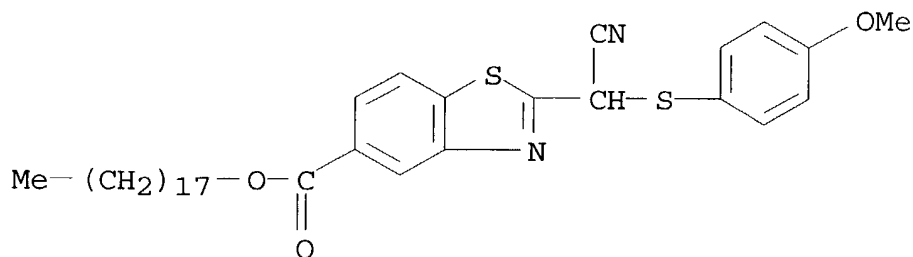
- AB The title **photog.** material contains .gtoreq.1 coupler of  
the formula I (C.beta. = C atom; EWG = CN, carbamoyl,  
alkoxycarbonyl; M = atoms required to form an arom. heterocycle  
along with C.beta.; LG = arylthio) in .gtoreq.1 of the hydrophilic  
colloid layers formed on a support. The material is heat-developed  
or developed under such a condition that alkali is generated by a  
slightly sol. metal salt and its complex-forming agent or by  
developing an alk. processing soln. to form **images**. The  
couplers show high coloring properties and stability and provides  
high quality color **images** with high sharpness and storage  
stability.
- IT **307932-84-9 307932-86-1 307932-88-3**

307932-90-7 307932-92-9

(photog. coupler having arylthio group)

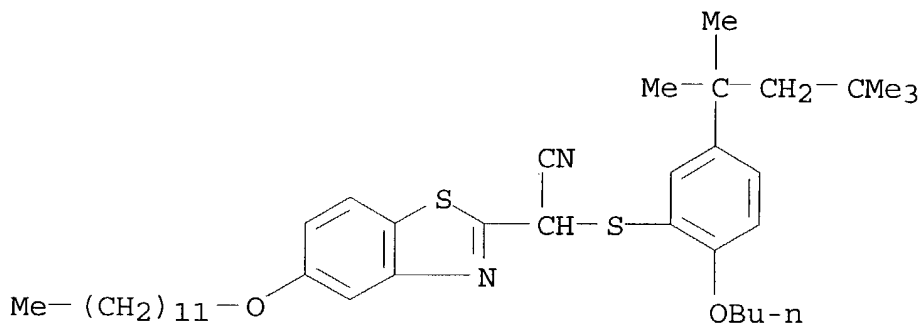
RN 307932-84-9 HCA

CN 5-Benzothiazolecarboxylic acid, 2-[cyano[(4-methoxyphenyl)thio]methyl]-, octadecyl ester (9CI) (CA INDEX NAME)



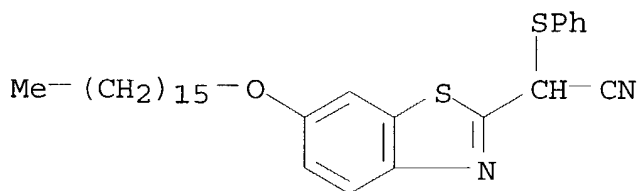
RN 307932-86-1 HCA

CN 2-Benzothiazoleacetonitrile, .alpha.-[[2-butoxy-5-(1,1,3,3-tetramethylbutyl)phenyl]thio]-5-(dodecyloxy)- (9CI) (CA INDEX NAME)



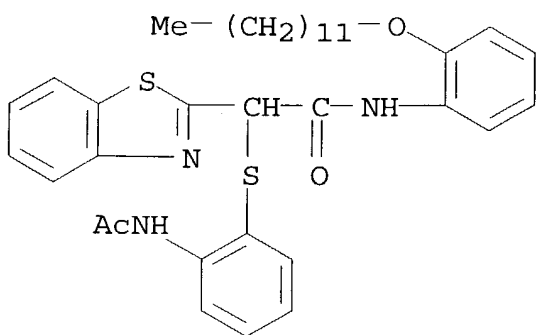
RN 307932-88-3 HCA

CN 2-Benzothiazoleacetonitrile, 6-(hexadecyloxy)-.alpha.-(phenylthio)- (9CI) (CA INDEX NAME)

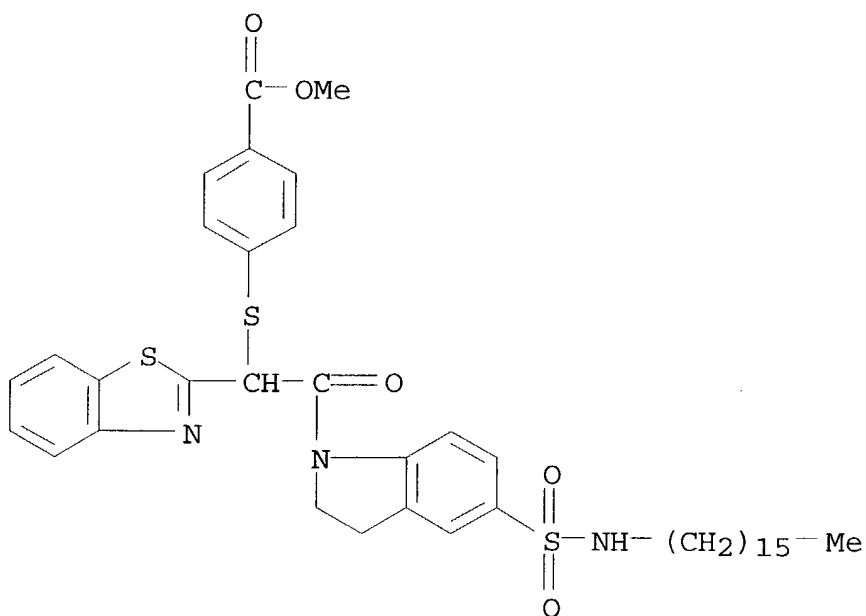


RN 307932-90-7 HCA

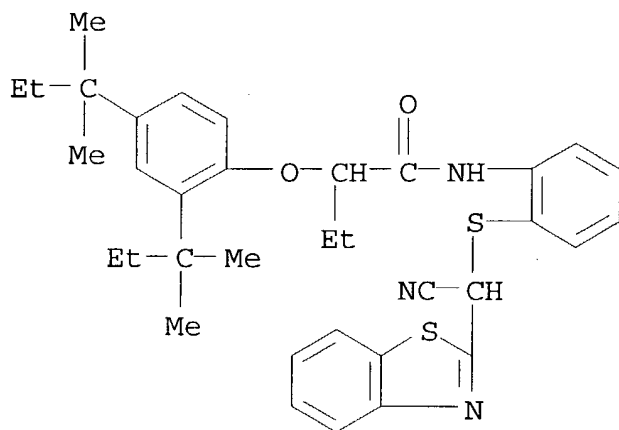
CN 2-Benzothiazoleacetamide, .alpha.-[[2-(acetylamino)phenyl]thio]-N-[2-(dodecyloxy)phenyl]- (9CI) (CA INDEX NAME)



RN 307932-92-9 HCA  
 CN Benzoic acid, 4-[[1-(2-benzothiazolyl)-2-[5-  
 [(hexadecylamino)sulfonyl]-2,3-dihydro-1H-indol-1-yl]-2-  
 oxoethyl]thio]-, methyl ester (9CI) (CA INDEX NAME)



IT 307930-51-4P  
 (photog. coupler having arylthio group)  
 RN 307930-51-4 HCA  
 CN Butanamide, N-[2-[(2-benzothiazolylcyanomethyl)thiol]phenyl]-2-[2,4-  
 bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

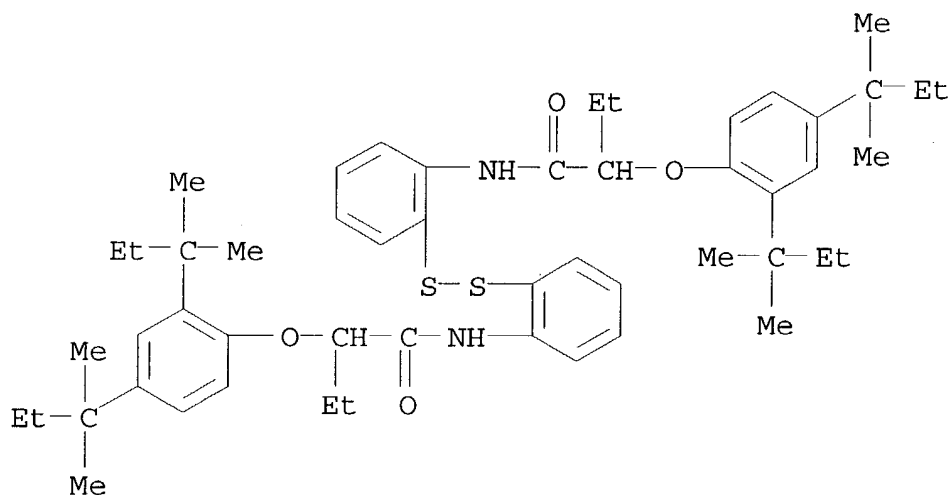


IT 156146-01-9P

(prepn. of **photog.** coupler)

RN 156146-01-9 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

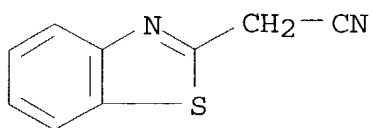


IT 56278-50-3, 2-Benzothiazoleacetonitrile

(prepn. of **photog.** coupler)

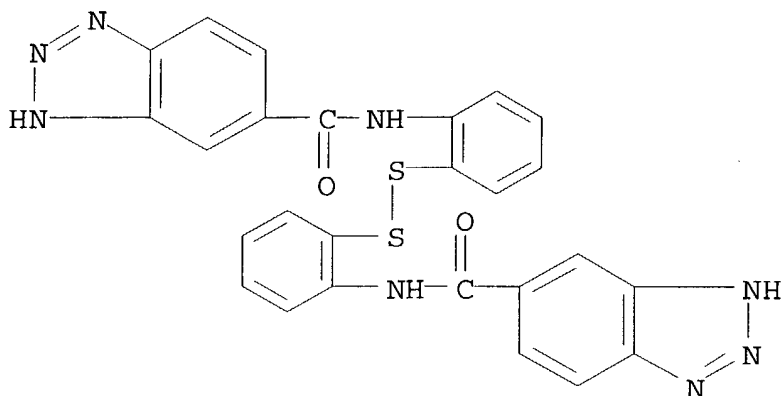
RN 56278-50-3 HCA

CN 2-Benzothiazoleacetonitrile (9CI) (CA INDEX NAME)





- IC ICM G03C007-32  
ICS G03C007-407; G03C007-46
- CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST **photog** coupler heterocyclic arylthio compd
- IT **Photographic** couplers  
(**photog.** coupler having arylthio group)
- IT 307932-84-9 307932-86-1 307932-88-3  
307932-90-7 307932-92-9 307932-94-1  
307932-96-3 307932-98-5 307933-00-2 307933-02-4 307933-04-6  
(**photog.** coupler having arylthio group)
- IT 307930-51-4P  
(**photog.** coupler having arylthio group)
- IT 156146-01-9P  
(prepn. of **photog.** coupler)
- IT 1141-88-4 40567-16-6 56278-50-3, 2-  
**Benzothiazoleacetonitrile**  
(prepn. of **photog.** coupler)
- L42 ANSWER 6 OF 10 HCA COPYRIGHT 2003 ACS
- 130:189472 Heterocyclic disulfide and **silver halide**  
photosensitive material. Asanuma, Naoki; Okada, Hisashi; Totani,  
Ichizo (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho  
JP 11043483 A2 19990216 Heisei, 48 pp. (Japanese).  
CODEN: JKXXAF. APPLICATION: JP 1997-215760 19970725.
- AB Title material contains Z1(L1)m1(A1)n1SSA2(L2)m2Z2 (Z1 = group  
promoting adsorption to **Ag halide**; Z2 = H, group  
promoting adsorption to **Ag halide**; L1, L2 =  
linking group; A1, A2 = alkylene, arylene, heterocyclylene; m1, m2,  
n1 = 0, 1; m1 + m2 + n1 .gtoreq. 1). The material may also contain  
Q(Y)rCX1X2W (Q = alkyl, aryl, heterocyclyl; X1, X2 = halo; W = H,  
electron-withdrawing group; Y = CO, SO, SO2; r = 0, 1). The  
material shows low fog and high abrasion resistance and is useful as  
heat-developable photosensitive material.
- IT 220653-04-3P  
(**silver halide** photosensitive material contg.  
heterocyclic disulfide)
- RN 220653-04-3 HCA
- CN 1H-Benzotriazole-5-carboxamide, N,N'-(dithiodi-2,1-phenylene)bis-  
(9CI) (CA INDEX NAME)

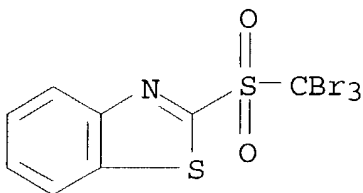


IT 31274-42-7 220653-01-0

(silver halide photosensitive material contg.  
heterocyclic disulfide)

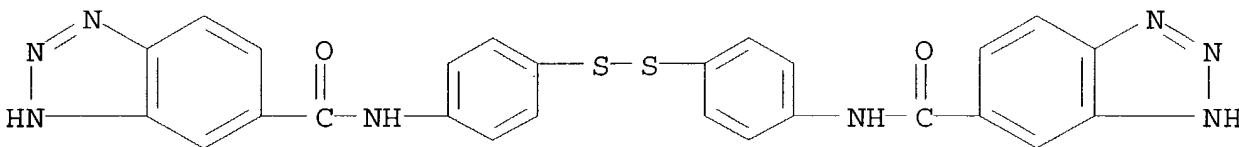
RN 31274-42-7 HCA

CN Benzothiazole, 2-[(tribromomethyl)sulfonyl]- (8CI, 9CI) (CA INDEX  
NAME)



RN 220653-01-0 HCA

CN 1H-Benzotriazole-5-carboxamide, N,N'-(dithiodi-4,1-phenylene)bis-  
(9CI) (CA INDEX NAME)



IC ICM C07D249-12

ICS C07D213-81; C07D235-28; C07D249-18; C07D257-04; C07D263-56;  
C07D271-10; C07D277-72; C07D285-135; G03C001-00; G03C001-498

CC 74-7 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)  
Section cross-reference(s): 28

ST heterocyclic disulfide **silver halide**  
photosensitive material; heat developable photosensitive material  
heterocyclic disulfide

IT Photothermographic copying

- (**silver halide** photosensitive material contg. heterocyclic disulfide)
- IT 102-28-3P 14070-48-5P 14124-34-6P 21548-91-4P, Sodium benzotriazole-5-sulfonate 92339-43-0P 220653-09-8P, 1-Ethoxycarbonyl-5-chlorosulfonylbenzotriazole (in prepn. of heterocyclic disulfide for **silver halide** photosensitive material)
- IT 122-28-1 5042-33-1 (in prepn. of heterocyclic disulfide for **silver halide** photosensitive material)
- IT 220652-99-3P 220653-00-9P 220653-02-1P 220653-03-2P 220653-04-3P (silver halide photosensitive material contg. heterocyclic disulfide)
- IT 17025-47-7 31274-42-7 160029-59-4 163342-70-9 200815-52-7 220653-01-0 220653-05-4 220653-06-5 220653-07-6 220653-08-7 (silver halide photosensitive material contg. heterocyclic disulfide)

L42 ANSWER 7 OF 10 HCA COPYRIGHT 2003 ACS

127:154564 **Silver halide photographic**

material containing sulfonyl and/or disulfide compound as fog inhibitor. Okada, Hisashi; Asanuma, Naoki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 09160167 A2 19970620 Heisei, 32 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-315008 19951204.

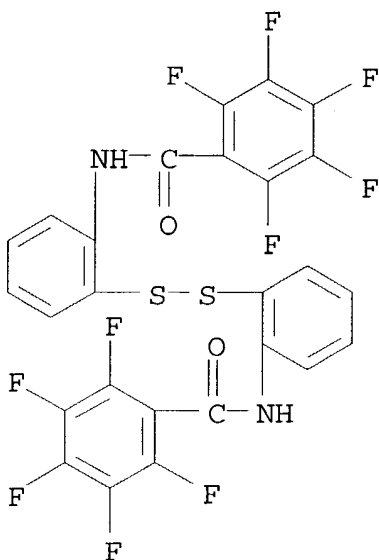
AB The **Ag halide** photosensitive material contains .gtoreq.1 compd.  $\text{RSO}_2\text{LSO}_2\text{CX}_1\text{X}_2\text{A}$  (I; R = aliph. hydrocarbon, aryl, heterocycle; L = divalent arylene or heterocycle; X<sub>1</sub>, X<sub>2</sub> = halo; A = H, halo, electron-attracting group). The heat development photosensitive material contains .gtoreq.1 of I and optionally .gtoreq.1 compd.  $\text{R}_1\text{S}_2\text{SnR}_2$  (R<sub>1</sub>, R<sub>2</sub> = aliph. hydrocarbon, aryl, heterocycle; n = 0-4). The materials shows high sensitivity and low fog and provides improved color quality **images**. Thus, a heat development photosensitive film was prepd. by using a **Ag halide** emulsion layer contg. p-MeSO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>CBr<sub>3</sub>.

IT 69200-87-9P 187744-22-5P 187744-23-6P 187744-24-7P

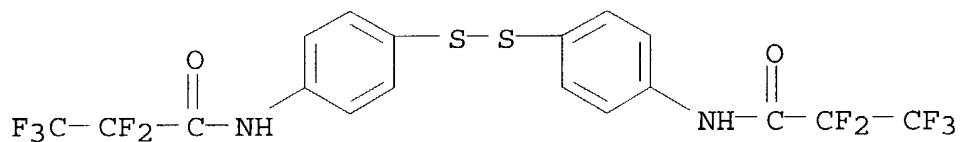
(heat-developable **photog.** film contg. sulfonyl and/or disulfide compd. as fog inhibitor)

RN 69200-87-9 HCA

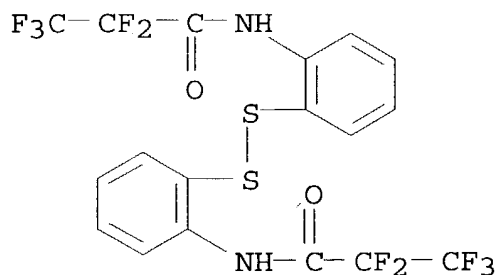
CN Benzamide, N,N'-(dithiodi-2,1-phenylene)bis[2,3,4,5,6-pentafluoro-(9CI) (CA INDEX NAME)



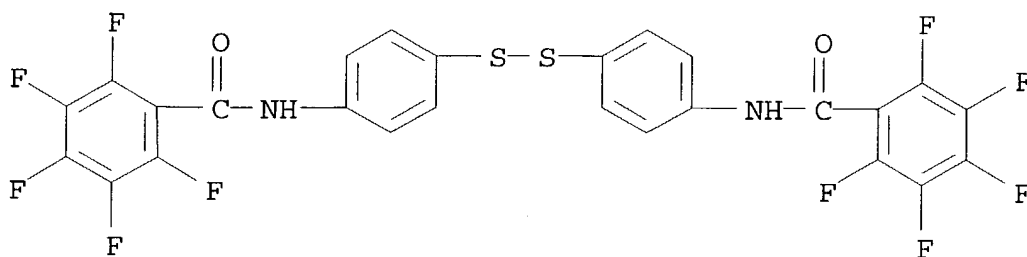
RN 187744-22-5 HCA  
 CN Propanamide, N,N'-(dithiodi-4,1-phenylene)bis[2,2,3,3,3-pentafluoro-  
 (9CI) (CA INDEX NAME)



RN 187744-23-6 HCA  
 CN Propanamide, N,N'-(dithiodi-2,1-phenylene)bis[2,2,3,3,3-pentafluoro-  
 (9CI) (CA INDEX NAME)



RN 187744-24-7 HCA  
 CN Benzamide, N,N'-(dithiodi-4,1-phenylene)bis[2,3,4,5,6-pentafluoro-  
 (9CI) (CA INDEX NAME)



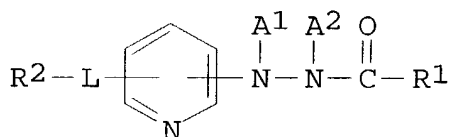
- IC ICM G03C001-498  
ICS G03C001-00; G03C001-35
- CC **74-2** (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST heat developable **photog** film fog inhibitor; sulfonyl compd  
**photog** fog inhibitor; disulfide compd **photog** fog  
inhibitor
- IT **Photographic** fog inhibitors  
(heat-developable **photog.** film contg. sulfonyl and/or  
disulfide compd. as fog inhibitor)
- IT **Photographic** films  
(heat-developable **photog.** film contg. sulfonyl and/or  
disulfide compd. as fog inhibitors)
- IT 152171-23-8P, [4-(Phenylthio)phenylthio] acetic acid  
(bromination of; prepn. of sulfonyl compd. **photog.** fog  
inhibitor)
- IT 187744-20-3 187744-21-4 187744-26-9 193342-81-3 193342-82-4  
193342-83-5 193342-84-6 193342-85-7 193342-86-8  
(heat-developable **photog.** film contg. sulfonyl and/or  
disulfide compd. as fog inhibitor)
- IT 2527-63-1P 3982-42-1P 4104-52-3P 4490-97-5P 4508-09-2P  
14897-91-7P 52017-43-3P **69200-87-9P** 152171-22-7P  
187744-16-7P 187744-18-9P **187744-22-5P**  
**187744-23-6P 187744-24-7P** 187744-25-8P  
187744-29-2P 187744-31-6P 187744-32-7P 187744-33-8P  
193342-87-9P 193342-88-0P 193342-89-1P 193342-90-4P  
(heat-developable **photog.** film contg. sulfonyl and/or  
disulfide compd. as fog inhibitor)
- IT 31183-89-8P, (2,2'-Diamino-5,5'-dichlorodiphenyl)disulfide  
31183-91-2P, (2,2'-Diamino-5,5'-dimethyldiphenyl)disulfide  
(prepn. of disulfide compd. **photog.** fog inhibitor)
- IT 62-53-3, Benzenamine, reactions 75-36-5, Acetyl chloride  
85-46-1, 1-Naphthalenesulfonyl chloride 86-84-0, 1-Naphthalene  
isocyanate 93-11-8, 2-Naphthalenesulfonyl chloride 95-24-9,  
2-Amino-6-**chlorobenzothiazole** 98-09-9, Benzenesulfonyl  
chloride 98-59-9, p-Toluenesulfonyl chloride 98-68-0,  
p-Methoxybenzenesulfonyl chloride 98-88-4, Benzoyl chloride  
103-71-9, Phenyl isocyanate, reactions 119-80-2 356-42-3,  
Pentafluoropropionyl anhydride 722-27-0 773-64-8,  
2-Mesitylenesulfonyl chloride 1141-88-4 2243-83-6,  
2-Naphthalenecarbonyl chloride 2251-50-5, Pentafluorobenzoyl

chloride 2524-64-3 2536-91-6, 2-Amino-6-methylbenzothiazole 15945-07-0, 2,4,5-Trichlorobenzenesulfonyl chloride  
(prepn. of disulfide compd. **photog.** fog inhibitor)  
IT 3926-62-3, Sodium monochloroacetate 52872-99-8,  
4-Phenylthiobenzenethiol  
(prepn. of sulfonyl compd. **photog.** fog inhibitor)

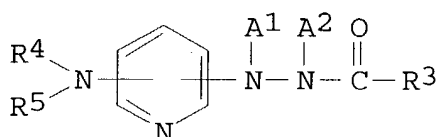
L42 ANSWER 8 OF 10 HCA COPYRIGHT 2003 ACS

117:58765 Nucleating agent-containing **photographic** material.  
Onodera, Akira; Usagawa, Yasushi (Konica Co., Japan). Jpn. Kokai  
Tokkyo Koho JP 03240037 A2 19911025 Heisei, 33 pp.  
(Japanese). CODEN: JKXXAF. APPLICATION: JP 1990-37772 19900219.

GI



I



II

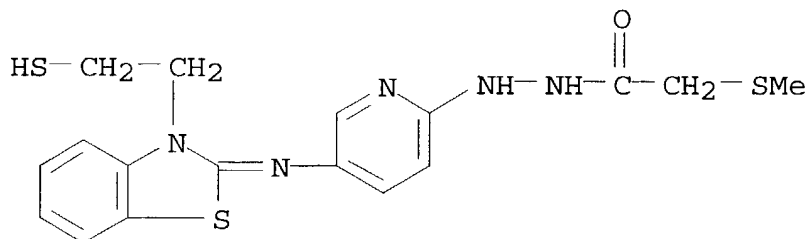
AB The title **photog.** material having .gtoreq.1 **Ag**  
**halide** emulsion layers contains I or II [A<sup>1</sup>,2 = H, acyl,  
sulfonyl, oxalyl; L = acrylamino, ureido, hydrazinocarbonylamino,  
hydrazonocarbonylamino; R<sup>1</sup>,3 = H, alkyl, aryl, heterocyclyl,  
carbamoyl, oxycarbonyl; R<sup>2</sup> = **Ag** halide-  
adsorption-promoting moiety, diffusion-resisting moiety; R<sup>4</sup>,5 = H,  
alkyl, alkenyl, alkynyl, aryl, heterocyclyl]. This high  
photosensitivity and high contrast **photog.** material can  
produce high quality halftone **images** with reduced fog  
level.

IT 142492-71-5

(nucleating agent, **photog.** material contg.)

RN 142492-71-5 HCA

CN Acetic acid, (methylthio)-, 2-[5-[[3-(2-mercaptoethyl)-2(3H)-  
benzothiazolylidene]amino]-2-pyridinyl]hydrazide (9CI) (CA INDEX  
NAME)

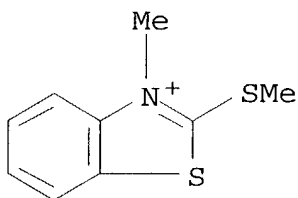


IT 142492-58-8

(reaction of, **photog.** nucleating yeast from)  
 RN 142492-58-8 HCA  
 CN Benzothiazolium, 3-methyl-2-(methylthio)-, methanesulfonate (9CI)  
 (CA INDEX NAME)

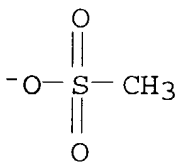
CM 1

CRN 46045-65-2  
 CMF C9 H10 N S2



CM 2

CRN 16053-58-0  
 CMF C H3 O3 S



IC ICM G03C001-06  
 ICS G03C001-34; G03C001-485  
 CC **74-2** (Radiation Chemistry, Photochemistry, and  
 Photographic and Other Reprographic Processes)  
 ST lithog **photog** material nucleating agent  
 IT **Photographic** films  
     **Photographic** paper  
     (lithog. nucleating agent contg., for good halftone **image**  
     quality)  
 IT 142492-59-9 142492-60-2 142492-61-3 142492-62-4 142492-63-5  
 142492-64-6 142492-65-7 142492-66-8 142492-67-9 142492-68-0  
 142492-69-1 142492-70-4 **142492-71-5** 142492-72-6  
 142492-73-7 142492-74-8 142492-75-9 142513-35-7  
     (nucleating agent, **photog.** material contg.)  
 IT 142492-52-2P 142492-53-3P 142492-54-4P 142492-55-5P  
 142492-56-6P 142492-57-7P  
     (prepn. and reaction of, **photog.** nucleating agent from)  
 IT 142492-43-1P 142492-44-2P 142492-45-3P 142492-46-4P  
 142492-47-5P 142492-48-6P 142492-49-7P 142492-50-0P  
 142492-51-1P

(prepn. and use of, as nucleating agent, **photog.** material contg.)

IT 23249-96-9 36768-62-4 40567-16-6 46053-85-4,  
1H-Benzotriazole-5-carbonyl chloride 51959-14-9 123919-01-7  
**142492-58-8**  
(reaction of, **photog.** nucleating yeast from)

L42 ANSWER 9 OF 10 HCA COPYRIGHT 2003 ACS

116:162453 **Silver halide** color **photographic**

material containing bleach-accelerating silver salt. Hirabayashi, Shigeto; Nagaoka, Yoko (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 03230158 A2 **19911014** Heisei, 25 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1990-26365 19900205.

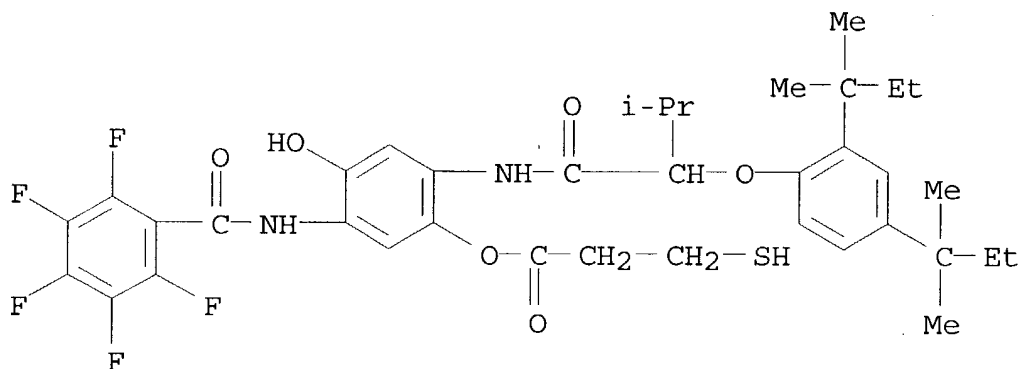
AB In the **photog.** material having .gtoreq.1 light-insensitive hydrophilic colloid layer contains (1) .gtoreq.1 light-sensitive layer contg. a compd. which releases a bleach-accelerator or its precursor by the reaction with the oxidized color developing agent and (2) .gtoreq.1 layer contg. a Ag salt of a bleach-accelerating compd. It has an excellent desilvering capability and provides an **image** with fine granularity. Ag salt of thiazolo-2-on-3-acetic acid was used as a bleach-accelerator.

IT **139695-72-0 139695-79-7**

(bleach accelerator-releasing **photog.** coupler)

RN 139695-72-0 HCA

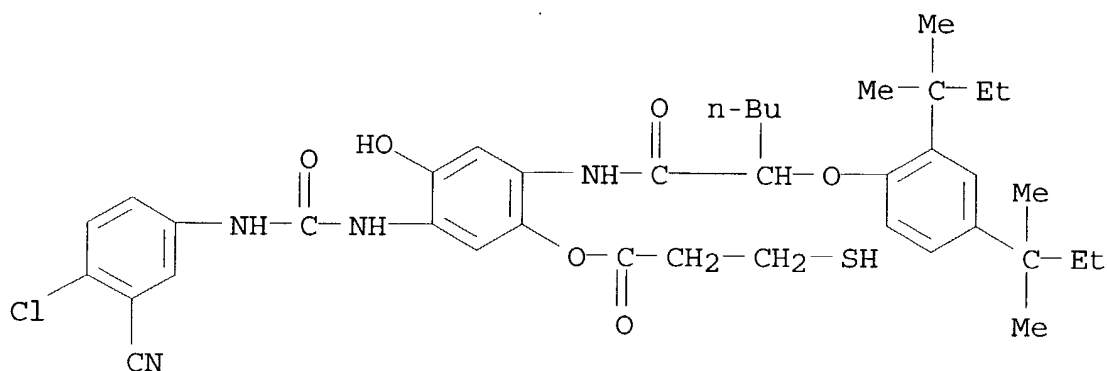
CN Propanoic acid, 3-mercapto-, 2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-3-methyl-1-oxobutyl]amino]-4-hydroxy-5-[(pentafluorobenzoyl)amino]phenyl ester (9CI) (CA INDEX NAME)



RN 139695-79-7 HCA

CN Propanoic acid, 3-mercapto-, 2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]-5-[[[(4-chloro-3-cyanophenyl)amino]carbonyl]amino]-4-hydroxyphenyl ester (9CI) (CA INDEX NAME)

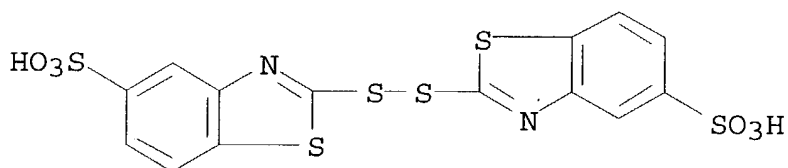




IT 42726-53-4

(photog. bleach accelerator)

RN 42726-53-4 HCA

CN 5-Benzothiazolesulfonic acid, 2,2'-dithiobis-, disodium salt (9CI)  
(CA INDEX NAME)

● 2 Na

IC ICM G03C007-305

ICS G03C007-20; G03C007-28

CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)ST bleach acceleratorazole photog material; thiazoles bleach  
accelerator photog material; thiourea deriv bleach  
accelerator photog

IT Photographic couplers

(bleach accelerator-releasing)

IT	105488-33-3	105504-92-5	115721-07-8	115721-11-4	126198-47-8
	130651-70-6	130651-71-7	130674-19-0	139695-59-3	139695-60-6
	139695-61-7	139695-62-8	139695-63-9	139695-64-0	139695-65-1
	139695-66-2	139695-67-3	139695-68-4	139695-69-5	139695-70-8
	139695-71-9	139695-72-0	139695-73-1	139695-74-2	
	139695-75-3	139695-76-4	139695-77-5	139695-78-6	
	139695-79-7	139695-80-0	139695-81-1	139700-68-8	
	139996-85-3				

(bleach accelerator-releasing photog. coupler)

IT 79-40-3, Ethanedithioamide 288-32-4, 1H-Imidazole, uses

444-27-9, 4-Thiazolidinecarboxylic acid 1072-11-3 2295-31-0,  
 2,4-Thiazolidinedione 26725-50-8, 1H-Benzotriazole-4-sulfonic acid  
 31061-23-1 **42726-53-4** 99127-74-9 137103-08-3  
 137103-09-4 137103-10-7 139695-82-2 139695-83-3

(**photog.** bleach accelerator)

IT 96345-64-1P 139695-84-4P  
 (prepn. of, **photog.** material contg.)

L42 ANSWER 10 OF 10 HCA COPYRIGHT 2003 ACS

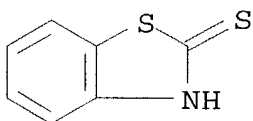
64:16012 Original Reference No. 64:2913d-e **Photographic**  
 compositions. (E. I. du Pont de Nemours & Co.). FR 1410426  
**19650910**, 62 pp. (Unavailable). APPLICATION: FR 19640805.

AB Solns. contg. a **Ag halide** and gelatin are  
 treated with a mercaptan of the general formula RSH, HSRSH,  
 p-RCONHC6H4SH, or a 2-mercaptothiazole, or a thiourea, or an  
 aromatic mercaptan at 0.125-314 g. mercaptan/mole **Ag**  
**halide**, and photosensitive layers are prepd. from the  
 compns., and the layers are exposed and washed with a solvent (of  
**Ag halide**) to give pos. **Ag**  
**halide images**. Thus, a Ag(Cl,Br) dispersion (70  
 mole % **AgCl** + 30 mole % **AgBr**) (I) in gelatin,  
 (I:gelatin ratio 28:1), is applied on a film at pH 6 to give 116 mg.  
 I/dm.2, the film is dried, immersed 30 sec. in an aq. EtOH soln. (pH  
 5.1) of 2-mercapto-4-phenylthiazole, dried, and exposed (behind a  
 negative) 15 sec. The film is kept 30 sec. in 12.8% Na2S2O3, rinsed  
 with H2O, and developed to give an exact reproduction.

IT **149-30-4**, 2-Benzothiazolethiol **2182-90-3**  
 , Benzanilide, 4'-mercapto-4-(pentyloxy)- **2457-82-1**,  
 Terephthalanilide, 4',4''-dimercapto- **2488-85-9**,  
 Phthalanilide, 4',4''-dimercapto- **2642-22-0**, Benzanilide,  
 4'-mercapto-4-nitro- **2642-23-1**, p-Anisanilide,  
 4'-mercapto-  
 (**photographic** emulsion contg.)

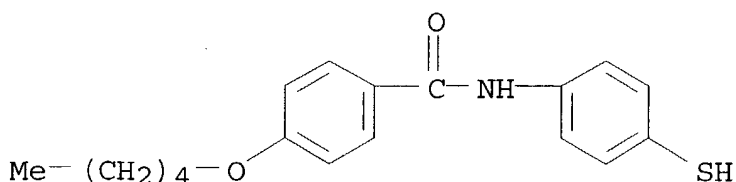
RN 149-30-4 HCA

CN 2(3H)-Benzothiazolethione (9CI) (CA INDEX NAME)

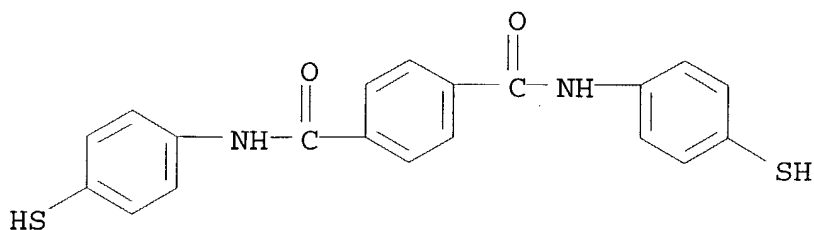


RN 2182-90-3 HCA

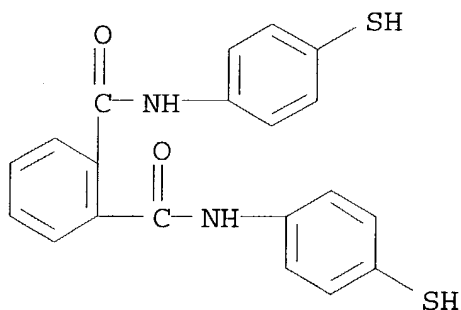
CN Benzanilide, 4'-mercapto-4-(pentyloxy)- (7CI, 8CI) (CA INDEX NAME)



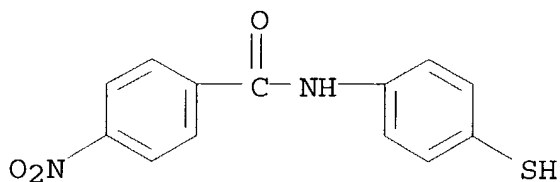
RN 2457-82-1 HCA  
CN Terephthalanilide, 4',4''-dimercapto- (7CI, 8CI) (CA INDEX NAME)



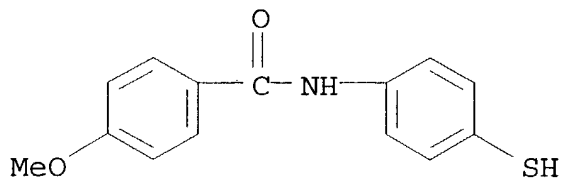
RN 2488-85-9 HCA  
CN Phthalanilide, 4',4''-dimercapto- (7CI, 8CI) (CA INDEX NAME)



RN 2642-22-0 HCA  
CN Benzanilide, 4'-mercapto-4-nitro- (7CI, 8CI) (CA INDEX NAME)



RN 2642-23-1 HCA  
CN p-Anisanilide, 4'-mercapto- (7CI, 8CI) (CA INDEX NAME)



IC G03C  
CC 11 (Radiation Chemistry and Photochemistry)

- IT **Photography**  
(emulsions and sensitive materials or layers for, contg. mercaptans)
- IT Thiols  
(**photographic** emulsion contg.)
- IT Succinonitrile, 2,3-dimercapto-  
(bis(tetramethylammonium) deriv., **photographic** emulsion contg.)
- IT Cyanamide, dimercapto-  
(dipotassium deriv., **photographic** emulsion contg.)
- IT Succinonitrile, 2,3-dimercapto-  
(disodium deriv., cis-, **photographic** emulsion contg.)
- IT 2-Benzimidazolethiol, 5(or 6)-amino-  
2-Benzimidazolethiol, 5(or 6)-nitro-  
2-**Benzothiazolethiol**, (3-amidinoguanidino)phenyl-  
Acetic acid, mercapto-, isooctyl ester  
Benzenethiol  
Benzenethiol, o-amino-  
Benzenethiol, p-amino-  
Isooctyl alcohol, 3-mercaptopropionate  
Octanamide, N-(2-mercapto-6-benzothiazoyl)-  
Sodium, [(1,2-dicyanoethylene)dithio]di-, cis-  
.alpha.-Toluenethiol, 2-methoxy-4-vinyl-  
(**photographic** emulsion contg.)
- IT 18771-18-1, Acrylic acid, 2-cyano-3,3-dimercapto-, ethyl ester  
(di-K deriv., **photographic** emulsion contg.)
- IT 7340-98-9, 4-Isothiazolecarbonitrile, 3,5-dimercapto-  
(disodium deriv., **photographic** emulsion contg.)
- IT 59-52-9, 1-Propanol, 2,3-dimercapto- 62-56-6, Urea, thio-  
70-49-5, Succinic acid, mercapto- 75-33-2, 2-Propanethiol  
75-66-1, 2-Propanethiol, 2-methyl- 79-19-6, Semicarbazide, thio-  
86-88-4, Urea, 1-(1-naphthyl)-2-thio- 86-93-1,  
1H-Tetrazole-5-thiol, 1-phenyl- 91-60-1, 2-Naphthalenethiol  
96-27-5, 1,2-Propanediol, 3-mercapto- 96-53-7,  
2-Thiazolidinethione 98-91-9, Benzoic acid, thio- 100-53-8,  
.alpha.-Toluenethiol 102-08-9, Carbanilide, thio- 103-85-5,  
Urea, 1-phenyl-2-thio- 106-45-6, p-Toluenethiol 106-53-6,  
Benzenethiol, p-bromo- 106-54-7, Benzenethiol, p-chloro-  
107-03-9, 1-Propanethiol 108-40-7, m-Toluenethiol 109-40-0,  
Urea, 1,3-dioctyl-2-thio- 109-46-6, Urea, 1,3-dibutyl-2-thio-  
109-79-5, 1-Butanethiol 110-66-7, 1-Pentanethiol 111-31-9,  
1-Hexanethiol 111-55-7, Ethylene glycol, diacetate 111-88-6,  
1-Octanethiol 112-55-0, 1-Dodecanethiol 137-06-4, o-Toluenethiol  
141-59-3, 2-Pentanethiol, 2,4,4-trimethyl- 141-84-4, Rhodanine  
143-10-2, 1-Decanethiol 147-93-3, Benzoic acid, o-mercaptop-  
**149-30-4, 2-Benzothiazolethiol** 496-74-2,  
Toluene-3,4-dithiol 513-44-0, 1-Propanethiol, 2-methyl-  
513-53-1, 2-Butanethiol 583-39-1, 2-Benzimidazolethiol 584-26-9,  
Hydantoin, 1-acetyl-2-thio- 591-08-2, Urea, 1-acetyl-2-thio-  
622-03-7, Carbohydrazide, 1,5-diphenyl-3-thio- 625-60-5, Acetic  
acid, thio-, S-ethyl ester 627-04-3, Acetic acid, (ethylthio)-  
630-10-4, Urea, seleno- 636-86-2, Hydantoin, 5-salicylidene-2-thio-

637-53-6, Acetanilide, thio- 645-96-5, Benzeneselenol  
 1072-71-5, 1,3,4-Thiadiazole-2,5-dithiol 1126-81-4, Acetanilide,  
 4'-mercapto- 1199-03-7, 2,3-Quinoxalinedithiol 1240-37-5, Urea,  
 1,3-di-1-naphthyl-2-thio- 1424-14-2, Urea, 1,3-dibenzyl-2-thio-  
 1444-47-9, Acetanilide, 2'-mercapto- 1455-21-6, 1-Nonanethiol  
 1534-08-3, Acetic acid, thio-, S-methyl ester 1639-09-4,  
 1-Heptanethiol 1679-08-9, 1-Propanethiol, 2,2-dimethyl-  
 1849-36-1, Benzenethiol, p-nitro- 2076-67-7, Sodium,  
 [(4-cyano-3,5-isothiazolediyl)dithio]di- 2084-19-7, 2-Pentanethiol  
 2103-88-0, 2-Thiazolethiol, 4-phenyl- 2182-83-4, Hexananilide,  
 4'-mercapto- 2182-85-6, Propionanilide, 4'-mercapto-2-methyl-  
 2182-86-7, Butyranilide, 4'-mercapto-3-methyl- 2182-87-8,  
 Octananilide, 4'-mercapto- 2182-88-9, Dodecananilide, 4'-mercapto-  
 2182-89-0, 1-Naphthanilide, 4'-mercapto- **2182-90-3**,  
 Benzanilide, 4'-mercapto-4-(pentyloxy)- 2182-91-4,  
 Cyclohexanecarboxanilide, 4'-mercapto- 2382-96-9,  
 2-Benzoxazolethiol 2396-68-1, Benzenethiol, p-tert-butyl-  
**2457-82-1**, Terephthalanilide, 4',4''-dimercapto-  
**2488-85-9**, Phthalanilide, 4',4''-dimercapto- 2637-37-8,  
 Carbostyryl, thio- **2642-22-0**, Benzanilide,  
 4'-mercapto-4-nitro- **2642-23-1**, p-Anisanilide,  
 4'-mercapto- 2669-09-2, Acetamide, thio-, S-oxide 2741-06-2,  
 Urea, 1-ethyl-3-phenyl-2-thio- 3855-24-1, 1,1-Cyclohexanedithiol  
 3898-08-6, Urea, 1,1-diphenyl-2-thio- 4366-50-1, Urea,  
 1-ethyl-1-(1-naphthyl)-2-thio- 4498-99-1, Methanethiol, p-tolyl-  
 4685-99-8, Propionanilide, 2-iodo- 4845-58-3, 2-  
**Benzothiazolethiol**, 6-nitro- 5332-52-5, 1-Undecanethiol  
 5351-69-9, Semicarbazide, 4-phenyl-3-thio- 5395-94-8, Carbanilide,  
 2,2'-diethylthio- 6601-20-3, Urea, 1,3-diallyl-2-thio-  
 7340-69-4, 2-**Benzothiazolethiol**, 5,6-dimethoxy-  
 7340-70-7, 2-**Benzothiazolethiol**, 6-acetamido- 7340-71-8,  
 Propionamide, N-(2-mercapto-6-**benzothiazolyl**)-2-methyl-  
 7340-74-1, 4H-1,3,4-Thiadiazine-2-thiol, 5,6-dihydro-4-phenyl-  
 7340-97-8, 1,3,4-Thiadiazole-2-thiol, 5,5'-thiobis- 7340-98-9,  
 4-Isothiazolecarbonitrile, 3,5-dimercapto- 7340-99-0, Potassium,  
 [(cyanoimino)dithio]di- 7341-00-6, Sodium,  
 [(carbamoylcyanovinylidene)dithio]di- 7341-01-7, Potassium,  
 [(carboxycyanovinylidene)dithio]di-, ethyl ester 7341-17-5,  
 1-Hexanethiol, 2-ethyl- 7341-24-4, Methanethiol, o-tolyl-  
 7341-26-6, .alpha.-Toluenethiol, o-ethyl- 7341-27-7,  
 .alpha.-Toluenethiol, p-ethyl- 7341-60-8, Benzophenone,  
 thiosemicarbazone 7341-63-1, Urea, 1-allyl-3-phenyl-2-thio-  
 7428-45-7, Dodecanamide, N-(2-mercapto-6-**benzothiazolyl**)-  
 7442-07-1, 2-**Benzothiazolethiol**, 6-amino- 10059-13-9,  
 2-Undecanethiol, 2-methyl- 15570-10-2, o-Toluenethiol,  
 4-tert-butyl- 17931-26-9, Naphtho[2,1-d]thiazole-2-thiol  
 18263-20-2, Benzanilide, thio-, S-oxide 25103-09-7, Isooctyl  
 alcohol, mercaptoacetate 30374-01-7, Propionic acid, 3-mercapto-,  
 isooctyl ester 38951-62-1, 1,3,4-Thiadiazolidine-2-thione,  
 4-phenyl-

(photographic emulsion contg.)

IT 7782-49-2, Selenium

(photographic emulsions contg. org.)

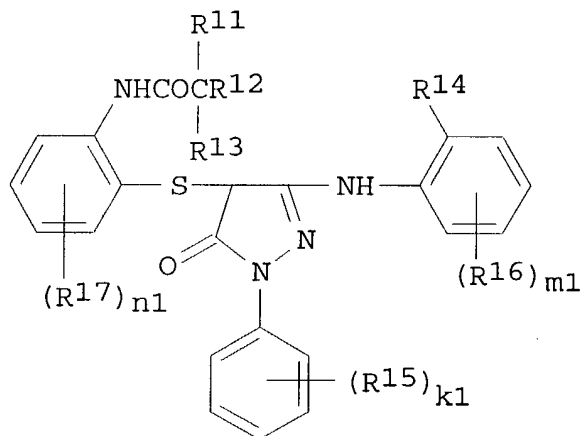
=&gt; d 145 1-26 cbib abs hitstr hitind

L45 ANSWER 1 OF 26 HCA COPYRIGHT 2003 ACS

135:53458 **Silver halide color photographic**

light sensitive material. Ishige, Osamu; Kataoka, Emiko; Hoshino, Hiroyuki (Konica Corporation, Japan). Eur. Pat. Appl. EP 1109061 A1 20010620, 67 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2000-311233 20001215. PRIORITY: JP 1999-357501 19991216.

GI



I

AB The invention relates to **silver halide color photog.** light-sensitive materials exhibiting enhanced sensitivity, superior color-forming properties and improved storage stability. A **Ag halide color photog.** light sensitive material is disclosed, comprising a support having thereon a blue-sensitive **Ag halide** emulsion layer, a green-sensitive **Ag halide** emulsion layer and a red-sensitive **Ag halide** emulsion layers, wherein .gtoreq.1 of the **Ag halide** emulsion layers contains a coupler I (R11 = secondary alkyl, tertiary alkyl, cycloalkyl; R12 = aryloxy; R13 = H, alkyl, cycloalkyl, aryl, heterocycle; R14 = halo, alkyl; R15, R16, R17 = substituent; k1 = 0-5; m1, n1 = 0-4).

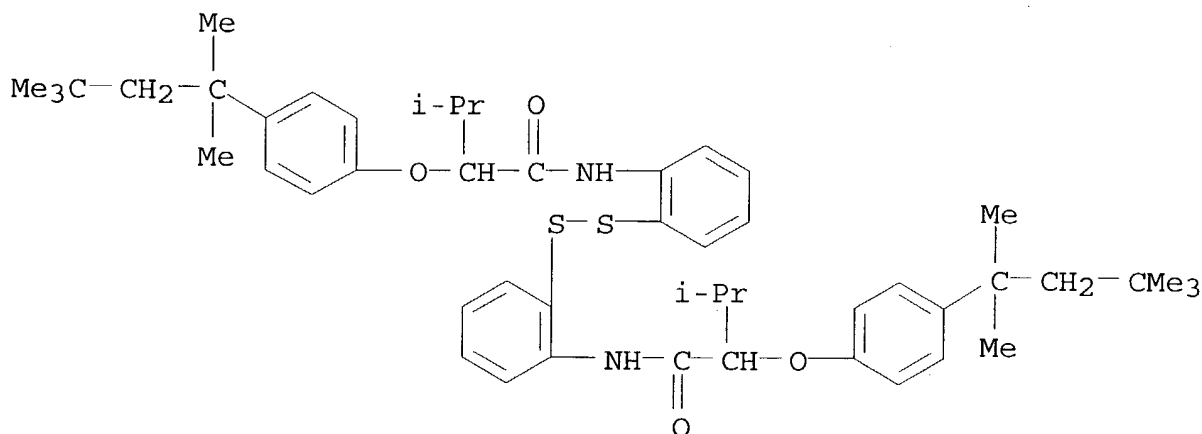
IT 373645-62-6

(color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)

RN 373645-62-6 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[3-methyl-2-[4-(1,1,3,3-

tetramethylbutyl)phenoxy]- (9CI) (CA INDEX NAME)

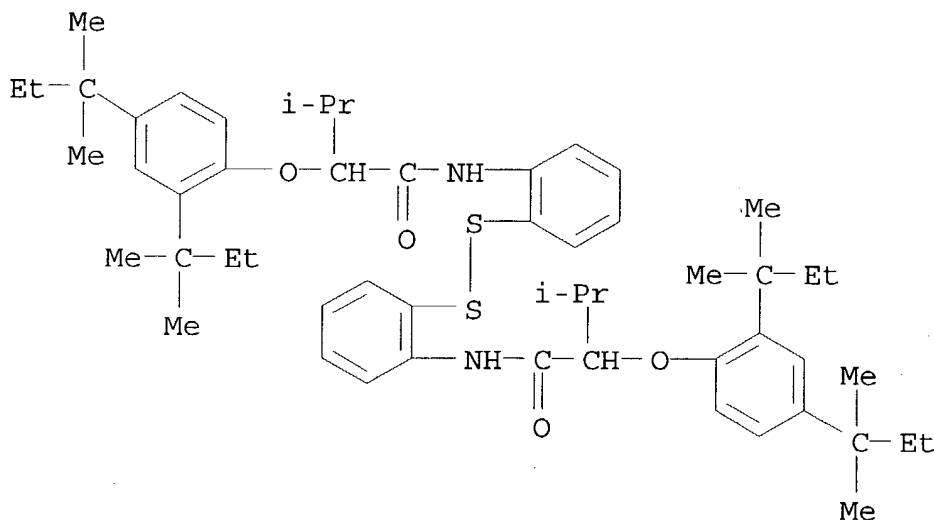


IT 344558-05-0P

(color **photog.** film contg. pyrazolone magenta coupler  
for improving sensitivity, color forming properties, and storage  
stability)

RN 344558-05-0 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-  
dimethylpropyl)phenoxy]-3-methyl- (9CI) (CA INDEX NAME)



IC ICM G03C007-30

ICS G03C007-305; G03C007-384; G03C007-392

ICA C07D231-52

CC **74-2** (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)

ST **silver halide** color **photog** pyrazolone  
coupler

IT Magenta couplers

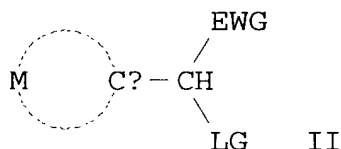
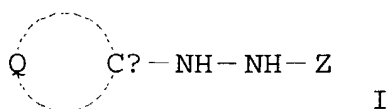
- (color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT **Photographic** films  
(color; color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT **Photographic** couplers  
(~~development~~-inhibitor-releasing; color **photog.** . film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT **Photographic** couplers  
(magenta; color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT 373645-62-6  
(color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT 344558-05-0P  
(color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT 137-07-5, 2-Aminothiophenol 85204-35-9 344558-07-2  
(color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT 1141-88-4P  
(color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT 373644-11-2 373645-55-7  
(magenta coupler; color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT 344558-06-1P  
(magenta coupler; color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)

L45 ANSWER 2 OF 26 HCA COPYRIGHT 2003 ACS

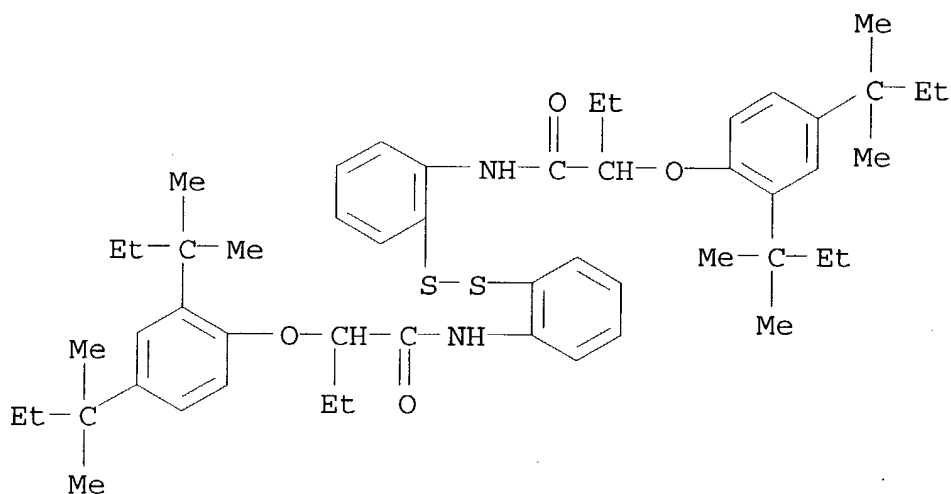
133:367807 **Silver halide** color **photographic** material containing color **developer** and coupler and **image** formation. Uchida, Osamu; Ishiwata, Yasuhiro; Katsumata, Taiji (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokyo Koho JP 2000321733 A2 **20001124**, 46 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-127300 19990507.

GI





- AB The material comprises a support having thereon .gtoreq.1 hydrophilic colloid layer contg. .gtoreq.1 color **developer** I (C.alpha. = C; Z = carbamoyl, acyl, alkoxycarbonyl, aryloxy carbonyl; Q = atoms required to form an unsatd. ring with C.alpha.) and .gtoreq.1 coupler II (C.beta. = C; EWG = CN, carbamoyl, alkoxycarbonyl; LG = releasing group by coupling-reaction with **developer** oxidn. product; M = atoms required to form 6-membered arom. heterocyclic ring with C.beta.). **Images** are formed by (1) heat-**developing** the material; (2) **developing** it in the presence of alkali generated by slightly sol. metal salt and its complexing agent; or (3) **developing** it with an alk. **developer**. The material shows improved color **development**, providing **images** with improved light, heat, and humidity stability.
- IT 156146-01-9P  
(prepn. of **photog.** yellow coupler)
- RN 156146-01-9 HCA
- CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)



- IC ICM G03C007-32  
ICS G03C001-42; G03C007-392; G03C007-407; G03C007-46
- CC **74-2** (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST **photog** film **developer** coupler; heat  
**development photog** film; alkali processing  
**photog** film
- IT **Photographic** films  
Yellow couplers  
(**photog.** film contg. **developer** and coupler)
- IT 190184-77-1 192567-42-3 286011-21-0 307496-43-1 307496-44-2  
307496-45-3 307496-47-5 307496-48-6 307496-49-7 307496-50-0  
307496-51-1 307496-52-2 307496-53-3 307496-54-4  
(**photog.** film contg. **developer** and coupler)
- IT 301335-97-7P 307496-46-4P  
(**photog.** film contg. **developer** and coupler)
- IT 72802-02-9P 90110-85-3P 307496-55-5P  
(prepn. of **photog. developer**)
- IT 302-01-2, Hydrazine, reactions 594-42-3 56406-50-9 61053-26-7  
(prepn. of **photog. developer**)
- IT 30750-23-3P **156146-01-9P**  
(prepn. of **photog.** yellow coupler)
- IT 88-68-6, o-Aminobenzamide 105-56-6, Ethyl 2-cyanoacetate  
1141-88-4 40567-16-6  
(prepn. of **photog.** yellow coupler)

L45 ANSWER 3 OF 26 HCA COPYRIGHT 2003 ACS

126:96827 **Silver halide photographic**

element for printing plate and its high contrast **image**  
formation method. Hanyu, Takeshi (Konishiroku Photo Ind, Japan).  
Jpn. Kokai Tokkyo Koho JP 08286304 A2 **19961101** Heisei, 22  
pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-89514  
19950414.

AB The **Ag halide photog.** element comprises a support, successively laminated with a hydrophilic colloid layer contg. a diffusion-resistant disulfide compd., a **Ag halide** emulsion layer, and an emulsion protection layer. The **Ag halide** emulsion layer may comprise (a) a halogen grain with **AgCl** content .gtoreq.60 mol.% and sensitized with a merocyanine or a cyanine dye, (b) a hydrazine or a tetrazolium, and optionally (c) a nucleating accelerator, preferably a latex. The **photog.** element may have .gtoreq.2 **Ag halide** emulsion layers with different sensitivity and contg. 1 .times. 10<sup>-6</sup>- 1 .times. 10<sup>-3</sup> mol (for 1 mol Ag) .gtoreq.1 metal selected from Ir, Rh, Os, and Ru and optionally hydroquinone monosulfonate and a layer contg. a diffusion-resistant disulfide and an UV absorber with .lambda.max 300-400 nm and contacting with the emulsion layer arranged in the lowest part. A **developer** contg. ascorbic acid or its precursor and free of hydroquinone is used in the **image** formation method. The **photog.** element shows improved sensitivity, pressure resistance, and storage stability.

IT 173609-95-5

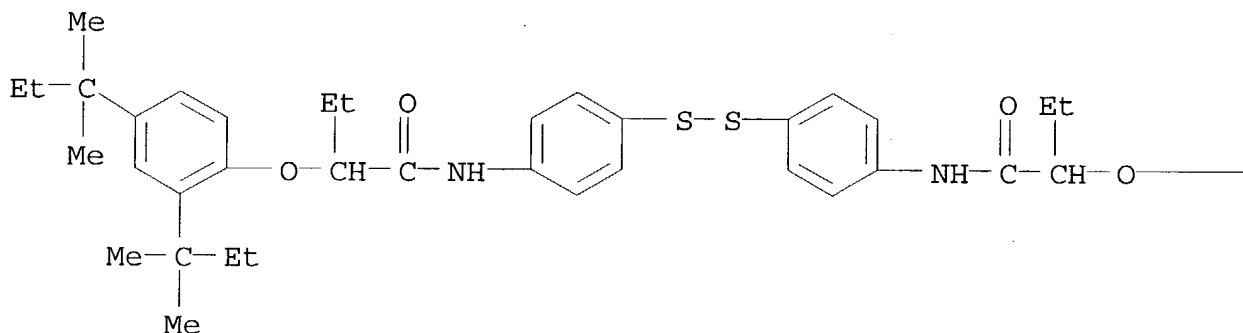
(in colloid layer; **Ag halide photog**

. element contg. disulfide for printing plate and its high contrast **image** formation method)

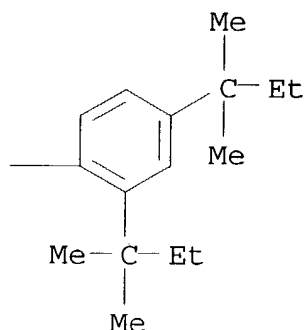
RN 173609-95-5 HCA

CN Butanamide, N,N'-(dithiodi-4,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



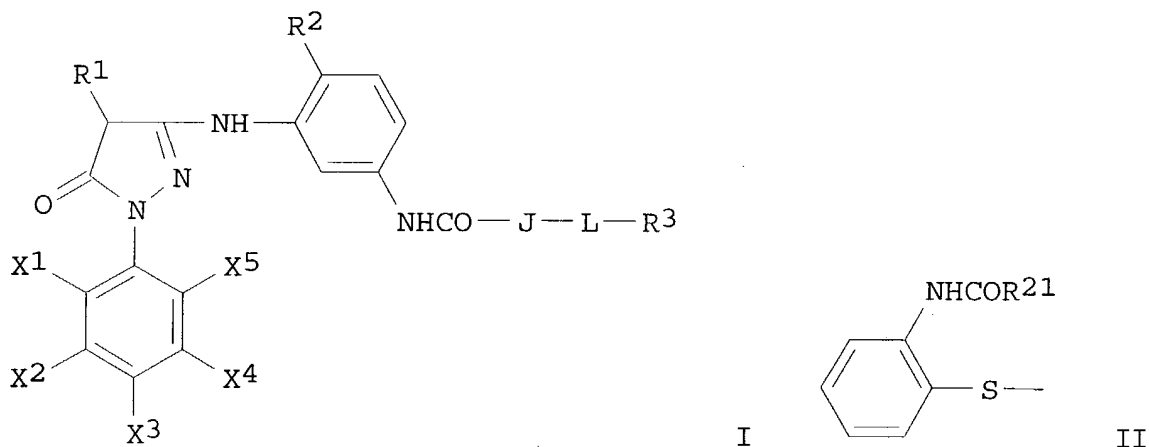
- IC ICM G03C001-06  
ICS G03C001-06; G03C001-035; G03C001-09; G03C001-12; G03C001-295;  
G03C001-42; G03C001-46; G03C001-815; G03C005-29
- CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST **silver halide photog** element printing  
plate; sulfide diffusion resistance **silver halide  
photog**
- IT **Photographic development**  
**Photographic plates**  
(**Ag halide photog.** element contg.  
disulfide for printing plate and its high contrast **image**  
formation method)
- IT Onium compounds  
(tetrazolium; **Ag halide photog.**  
element contg. disulfide for printing plate and its high contrast  
**image** formation method)
- IT 86551-61-3 180305-19-5  
(**Ag halide photog.** element contg.  
disulfide for printing plate and its high contrast **image**  
formation method)
- IT 17438-29-8, Hydroquinone monosulfonate  
(**Ag halide photog.** element contg.  
disulfide for printing plate and its high contrast **image**  
formation method)
- IT 25189-68-8, 2-Hydroxy-4-(methacryloyloxyethoxy)benzophenone-methyl  
methacrylate copolymer  
(UV absorber; **Ag halide photog.**  
element contg. disulfide for printing plate and its high contrast  
**image** formation method)
- IT 89-65-6, Isoascorbic acid  
(**developer; Ag halide  
photog.** element contg. disulfide for printing plate and  
its high contrast **image** formation method)
- IT 7439-88-5, Iridium, uses 7440-04-2, Osmium, uses 7440-16-6,  
Rhodium, uses 7440-18-8, Ruthenium, uses  
(dopant; **Ag halide photog.** element

- contg. disulfide for printing plate and its high contrast **image** formation method)
- IT 173609-95-5 185538-97-0 185539-02-0 185539-05-3  
(in colloid layer; **Ag halide photog**  
. element contg. disulfide for printing plate and its high  
contrast **image** formation method)
- IT 185539-09-7  
(nucleating agent; **Ag halide photog**  
. element contg. disulfide for printing plate and its high  
contrast **image** formation method)

L45 ANSWER 4 OF 26 HCA COPYRIGHT 2003 ACS

126:82143 **Silver halide color photographic**  
photosensitive material. Suzuki, Takashi; Tanaka, Mari (Konishiroku  
Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08278614 A2  
19961022 Heisei, 24 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 1995-82626 19950407.

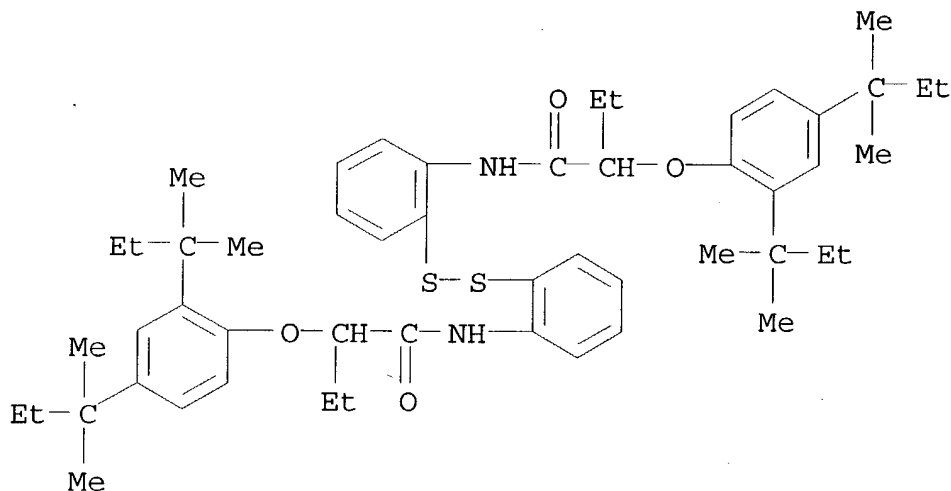
GI



AB The material comprises a support, and red-, green-, and red-sensitive **Ag halide** emulsion layers, contains a magenta coupler I [R1 = group released by reaction with oxidized **developing** agent; R2 = Cl, alkoxy group; J = divalent or trivalent alkylene or arylene; L = -NHSO2-, -SO2NH,-; R3 = alkyl, aryl; total C no. of J and R3 .ltoreq.10; X1, X2, X3, X4, X5 = F, Cl, Br, I]. R1 may be arylthio group, II (R21 = substitution group). The material shows high sensitivity and gives high-d. color, excellent color reproducibility, and log fog **images**.

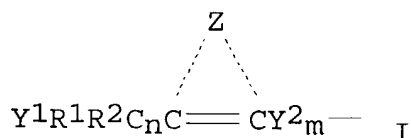
- IT 156146-01-9  
(in manuf. of magenta coupler for **silver halide**  
color **photog.** photosensitive material)

RN 156146-01-9 HCA  
 CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

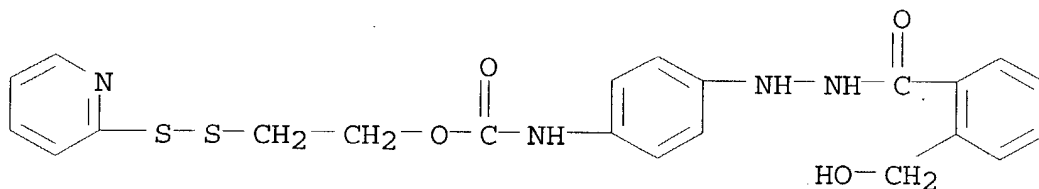


IC ICM G03C007-384  
 ICS G03C007-00  
 CC 74-2 (Radiation Chemistry, Photochemistry, and  
 Photographic and Other Reprographic Processes)  
 ST **silver halide photog** magenta coupler  
 IT Magenta couplers  
 (silver halide color photog.  
 . photosensitive material)  
 IT 153070-75-8P 184896-92-2P 184896-93-3P  
 (in manuf. of magenta coupler for **silver halide**  
 color **photog.** photosensitive material)  
 IT 28547-13-9 156146-01-9  
 (in manuf. of magenta coupler for **silver halide**  
 color **photog.** photosensitive material)  
 IT 184896-88-6P  
 (magenta coupler; **silver halide** color  
**photog.** photosensitive material)  
 IT 184896-86-4 184896-87-5 184896-89-7 184896-90-0 184896-91-1  
 (magenta coupler; **silver halide** color  
**photog.** photosensitive material)  
 L45 ANSWER 5 OF 26 HCA COPYRIGHT 2003 ACS  
 125:288707 **Silver halide photographic**  
 materials containing hydrazine DIR compound for **image**  
 formation. Miura, Akio; Yamada, Taketoshi; Kato, Katsunori  
 (Konishiroku Photo Ind., Japan). Jpn. Kokai Tokkyo Koho JP 08201958  
 A2 19960809 Heisei, 24 pp. (Japanese). CODEN: JKXXAF.  
 APPLICATION: JP 1995-9000 19950124.

GI

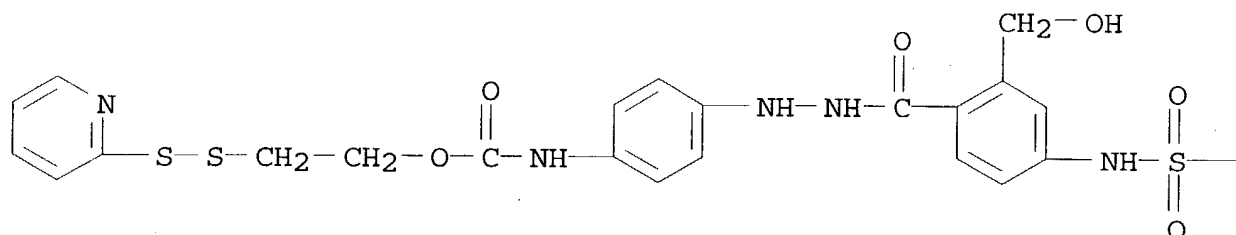


- AB The **photog.** materials contain hydrazine DIR compd.  
XCONA1NA2(INH) (X has functional group to release XCO in the presence of **developer** oxide and form XCO-contg. ring; A1-2 = H, or one is H and the other is alkylsulfonyl, arylsulfonyl, acyl; INH = monovalent **development** inhibitor group). The substituent X may be represented by the structure I (Z = at. group to form 5- or 6-membered ring; R1-2 = H, alkyl, aryl; n = 0-2; Y1 = OH, SH, NHR3; R3 = H, alkyl, aryl; Y2 = bivalent linkage with 1-2 atom(s) in main chain). The **photog.** materials contain a hydrazine deriv. other than the DIR compd. They are processed with a low-pH **developer** (pH .1 to req. 11). They give high-contrast **images** with wide halftone gradation.
- IT 182480-84-8 182480-87-1 182480-89-3  
182480-91-7  
(DIR compds.; **silver halide photog.**  
materials contg. hydrazine DIR compd. for wide halftone gradation and their processing)
- RN 182480-84-8 HCA
- CN Benzoic acid, 2-(hydroxymethyl)-, 2-[4-[[[2-(2-pyridinyldithio)ethoxy]carbonyl]amino]phenyl]hydrazide (9CI) (CA INDEX NAME)

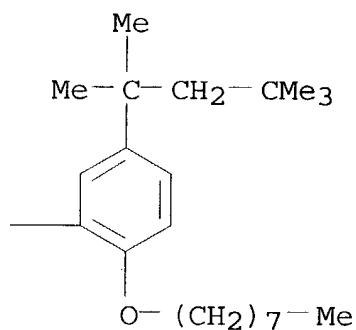


- RN 182480-87-1 HCA
- CN Benzoic acid, 2-(hydroxymethyl)-4-[[[2-(octyloxy)-5-(1,1,3,3-tetramethylbutyl)phenyl]sulfonyl]amino]-, 2-[4-[[[2-(2-pyridinyldithio)ethoxy]carbonyl]amino]phenyl]hydrazide (9CI) (CA INDEX NAME)

PAGE 1-A

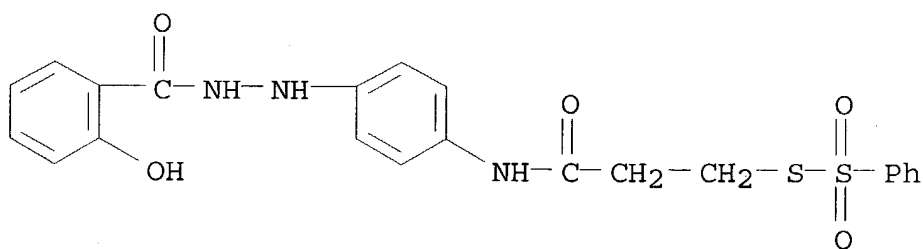


PAGE 1-B



RN 182480-89-3 HCA

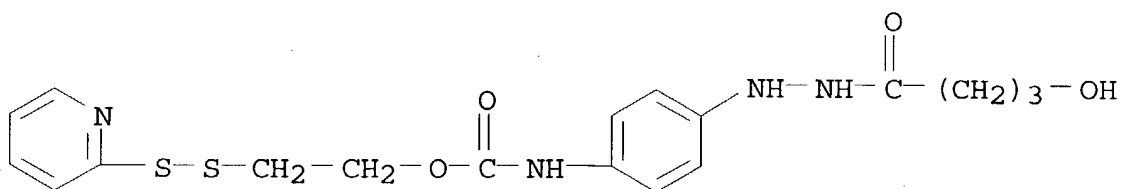
CN Benzoic acid, 2-hydroxy-, 2-[4-[[1-oxo-3-  
[(phenylsulfonyl)thio]propyl]amino]phenyl]hydrazide (9CI) (CA INDEX  
NAME)



RN 182480-91-7 HCA

CN Butanoic acid, 4-hydroxy-, 2-[4-[[[2-(2-  
pyridinyldithio)ethoxy]carbonyl]amino]phenyl]hydrazide (9CI) (CA  
INDEX NAME)





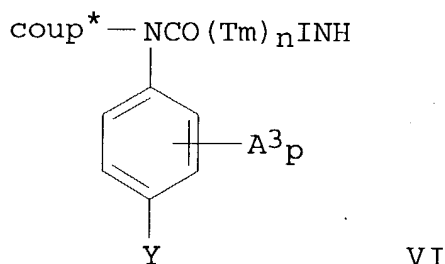
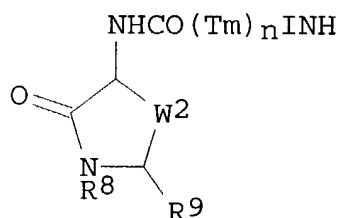
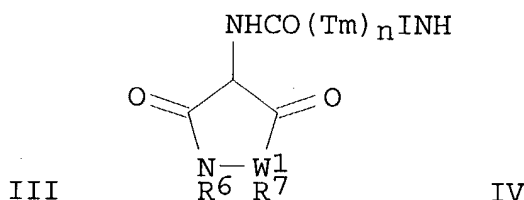
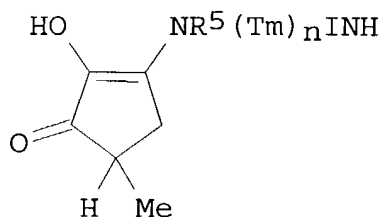
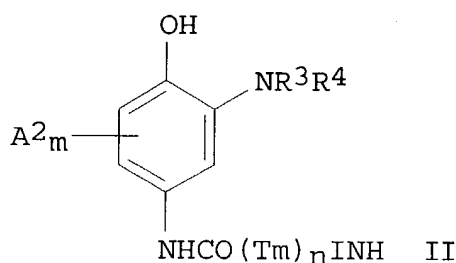
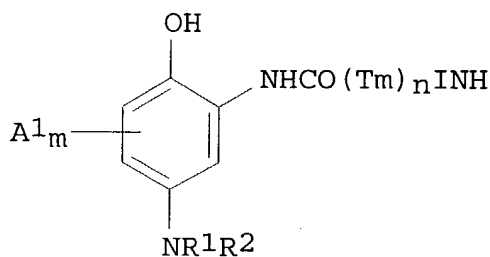
- IC ICM G03C001-43  
ICS G03C001-06
- CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST **silver halide photog** hydrazine DIR;  
**development** inhibitor releasing hydrazine **photog**
- IT **Photographic development**  
(with low-pH **developers**; **silver**  
**halide photog.** materials contg. hydrazine DIR  
compd. for wide halftone gradation and their processing)
- IT **Photographic couplers**  
(**development-inhibitor-releasing**, **silver**  
**halide photog.** materials contg. hydrazine DIR  
compd. for wide halftone gradation and their processing)
- IT 182480-85-9P 182480-88-2P 182480-90-6P  
(DIR compds.; **silver halide photog.**  
materials contg. hydrazine DIR compd. for wide halftone gradation  
and their processing)
- IT 182480-84-8 182480-86-0 182480-87-1  
182480-89-3 182480-91-7 182480-92-8  
(DIR compds.; **silver halide photog.**  
materials contg. hydrazine DIR compd. for wide halftone gradation  
and their processing)
- IT 124013-75-8 146177-68-6 168404-05-5  
(nucleating agents; **silver halide**  
**photog.** materials contg. hydrazine DIR compd. for wide  
halftone gradation and their processing)

L45 ANSWER 6 OF 26 HCA COPYRIGHT 2003 ACS

125:288701 **Silver halide photographic**

materials containing **development-inhibitor-releasing** (DIR)  
compounds and **image** formation. Miura, Akio; Komamura,  
Tawara; Yamada, Taketoshi (Konishiroku Photo Ind, Japan). Jpn.  
Kokai Tokkyo Koho JP 08194281 A2 19960730 Heisei, 27 pp.  
(Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-4957 19950117.

GI



AB The **photog.** materials contain the compd. I (R1-2 = H, alkyl, aryl, heterocycle; A1 = substituent of benzene ring; m = 0-3; Tm = timing group; n = 0, 1; INH = **development** inhibitor group), II (R3-4 = H, alkyl, aryl, heterocycle; A2 = substituent of benzene ring; m = 0-3; Tm = timing group; n = 0, 1; INH = **development** inhibitor group), III (R5 = H, alkyl, aryl, heterocycle; Tm = timing group; n = 0, 1; INH = **development** inhibitor group), IV (R6-7 = H, alkyl, aryl, heterocycle; W1 = CN, N; Tm = timing group; n = 0, 1; INH = **development** inhibitor group), V (R8-9 = H, alkyl, aryl, heterocycle; W2 = S, SO, SO2; Tm = timing group; n = 0, 1; INH = **development** inhibitor group) or VI (A3 = substituent of benzene ring; p = 0-4; Y = R10R11, OH; R10-11 = H, alkyl, aryl, heterocycle; COUP = coupler group for coupling with arom. primary amine **developer** oxide; \* = coupling position). The **photog.** materials preferably contain a hydrazine compd. The **photog.** materials are **developed** with a low-pH **developer** (pH .ltoreq.11). The **photog.** materials provide high-contrast **images** and have a wide halftone gradation.

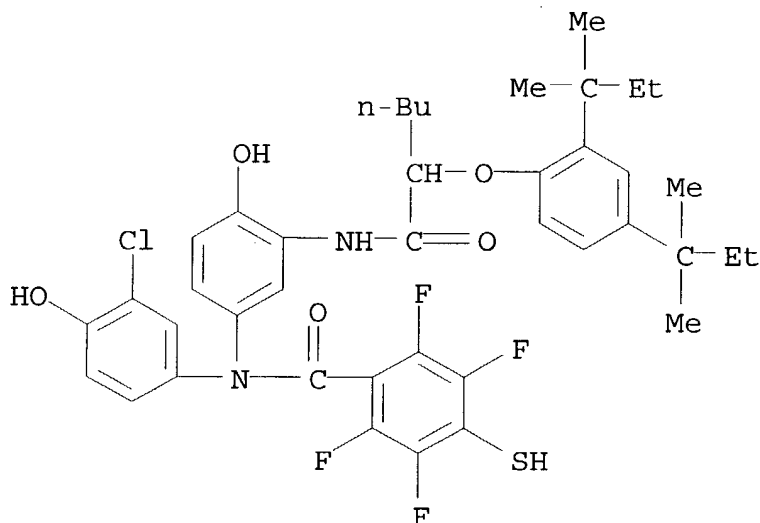
IT 182560-40-3

(**development**-inhibitor-releasing compds.;

**silver halide photog. materials**  
 contg. **development-inhibitor-releasing compds. and**  
**image formation)**

RN 182560-40-3 HCA

CN Benzamide, N-[3-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]-4-hydroxyphenyl]-N-(3-chloro-4-hydroxyphenyl)-2,3,5,6-tetrafluoro-4-mercapto- (9CI) (CA INDEX NAME)



IC ICM G03C001-43

ICS G03C001-06; G03C005-29

CC 74-2 (Radiation Chemistry, Photochemistry, and  
 Photographic and Other Reprographic Processes)

ST **silver halide photog**  
**development inhibitor releasing**

IT **Photographic development**  
 (by low-pH **developers**; **silver halide**  
**photog. materials contg. development**  
**-inhibitor-releasing compds. and image formation)**

IT **Photographic couplers**  
 (**development-inhibitor-releasing, silver**  
**halide photog. materials contg.**  
**development-inhibitor-releasing compds. and image**  
**formation)**

IT 177097-77-7P 182560-26-5P 182560-32-3P 182560-35-6P  
 (**development-inhibitor-releasing compds.;**  
**silver halide photog. materials**  
 contg. **development-inhibitor-releasing compds. and**  
**image formation)**

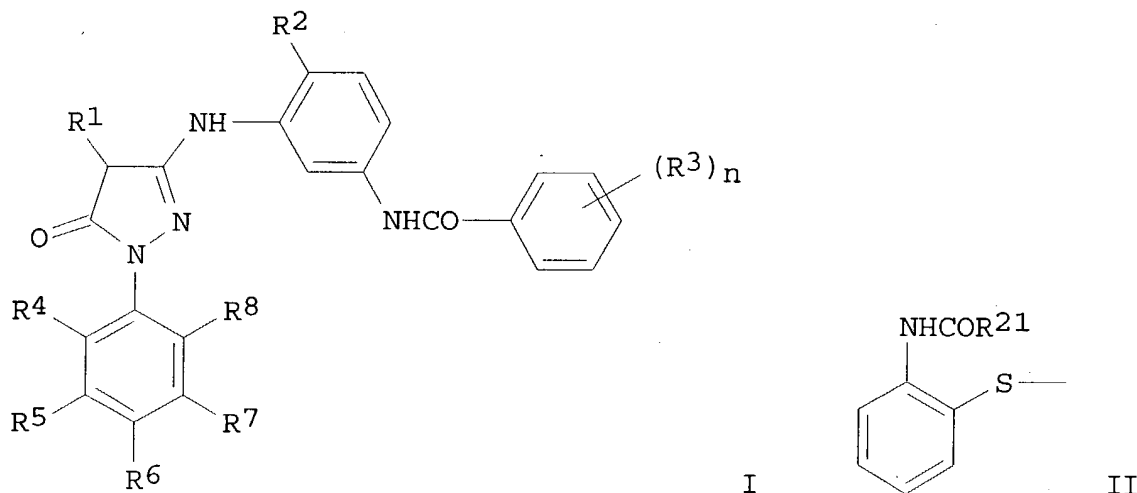
IT 182560-22-1 182560-24-3 182560-28-7 182560-30-1 182560-33-4  
 182560-34-5 182560-37-8D, deriv 182560-39-0 **182560-40-3**  
 (**development-inhibitor-releasing compds.;**  
**silver halide photog. materials**  
 contg. **development-inhibitor-releasing compds. and**

image formation)

IT 124013-75-8 168404-05-5 174642-75-2  
(silver halide photog. materials  
contg. development-inhibitor-releasing compds. and  
image formation)

L45 ANSWER 7 OF 26 HCA COPYRIGHT 2003 ACS  
125:208344 Silver halide color photographic  
material. Tanaka, Mari; Kaneko, Manabu; Nagato, Michiko  
(Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08171186  
A2 19960702 Heisei, 23 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 1994-312077 19941215.

GI

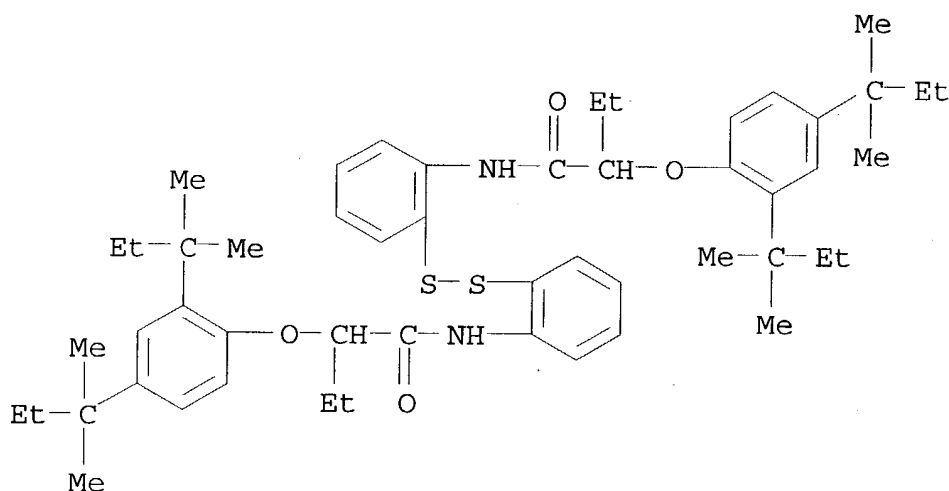


AB The material contains a magenta coupler I (R1 = H, a group eliminating by reaction with an oxidized developer; R2 = Cl, alkoxy; R3 = a substituent; n = 1-5; R4-8 = halo) in 1 of Ag halide emulsion layers on a support. The material, contg. I where R1 = arylthio, is also claimed. The material, contg. I where 1 of R3 substituting at the ortho position toward NHCO, is also claimed. The material, contg. I where R4-8 = Cl, is also claimed. The material, contg. I where R1 being II (R21 = a substituent), is also claimed. The material shows high sensitivity and good color reproducibility.

IT 156146-01-9P  
(in prepn. of magenta coupler for silver halide  
color photog. material)

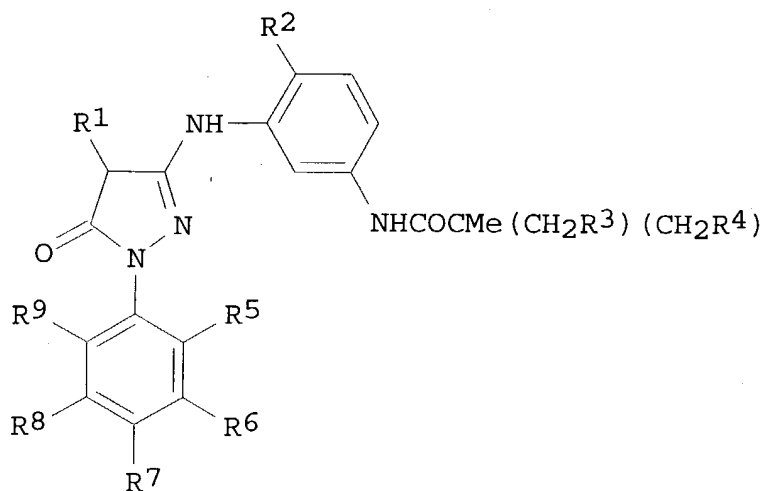
RN 156146-01-9 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)



- IC ICM G03C007-384  
ICS G03C007-00; G03C007-26
- CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 25
- ST **silver halide color photog coupler**  
magenta
- IT **Photographic couplers**  
(**silver halide color photog.** material)
- IT 181305-10-2P  
(emulsion layer; prepn. of magenta coupler for **silver halide color photog.** material)
- IT 181305-11-3 181305-12-4 181305-13-5 181305-14-6 181305-15-7  
181305-16-8 181305-17-9  
(emulsion layer; prepn. of magenta coupler for **silver halide color photog.** material)
- IT 155124-15-5, **Silver bromide iodide**  
(emulsion layer; **silver halide color photog.** material)
- IT 4659-45-4P 153070-75-8P **156146-01-9P** 181305-09-9P  
(in prepn. of magenta coupler for **silver halide color photog.** material)
- IT 50-30-6, 2,6-Dichlorobenzoic acid 7719-09-7, Thionyl chloride  
(in prepn. of magenta coupler for **silver halide color photog.** material)
- L45 ANSWER 8 OF 26 HCA COPYRIGHT 2003 ACS  
125:181149 **Silver halide color photographic** materials for high color sensitivity. Kaneko, Manabu; Tanaka, Mari; Nagato, Michiko (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08160583 A2 **19960621** Heisei, 21 pp. (Japanese).  
CODEN: JKXXAF. APPLICATION: JP 1994-307644 19941212.

GI



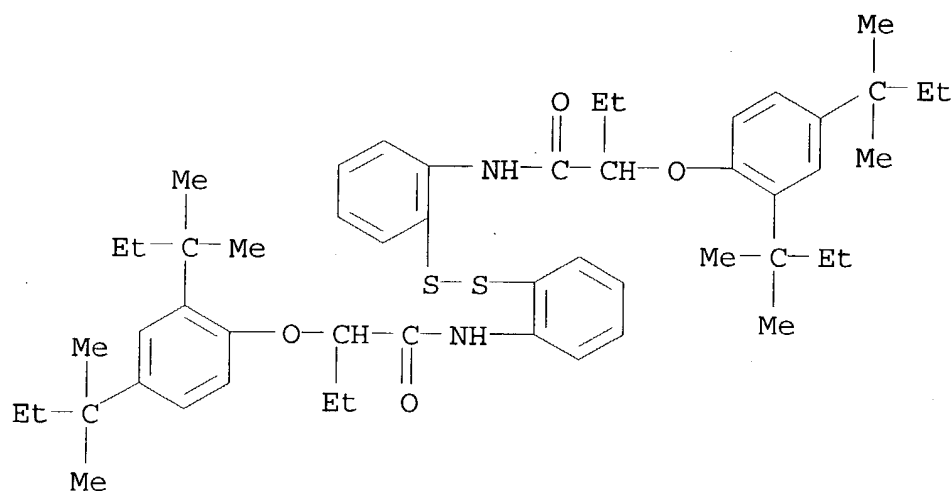
AB The title materials having a blue-sensitive **Ag** halide emulsion layer, a green-sensitive **Ag** halide emulsion layer, and a red-sensitive **Ag** halide emulsion layer contain the coupler I (R1 = H, leaving group by coupling with oxide of color **developer**; R2 = Cl, alkoxy; R3-4 = H, substituent; R5-9 = halo; R3 = R4 .noteq. H, e.g., R3 and/or R4 = OR10, OOCR11; R10 = H, alkyl, aryl; R11 = alkyl, aryl) in the green-sensitive emulsion layer. The coupler gives thin-film **photog.** materials.

IT 156146-01-9

(magenta couplers for thin-film **photog.** materials with high color sensitivity)

RN 156146-01-9 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)



IC ICM G03C007-384

ICS G03C007-00

CC **74-2** (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)

ST magenta coupler **silver halide photog**

IT **Photographic** couplers

(magenta couplers for thin-film **photog.** materials with  
high color sensitivity)

IT 180890-03-3P

(magenta couplers for thin-film **photog.** materials with  
high color sensitivity)

IT **156146-01-9** 180890-16-8

(magenta couplers for thin-film **photog.** materials with  
high color sensitivity)

IT 180890-04-4 180890-05-5 180890-06-6 180890-07-7 180890-08-8

180890-09-9 180890-10-2 180890-11-3 180890-12-4 180890-13-5

180890-14-6 180890-15-7

(magenta couplers for thin-film **photog.** materials with  
high color sensitivity)

L45 ANSWER 9 OF 26 HCA COPYRIGHT 2003 ACS

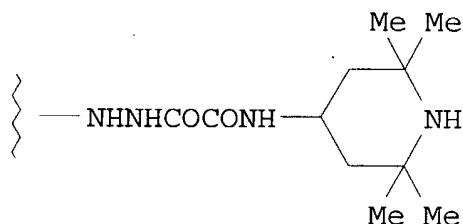
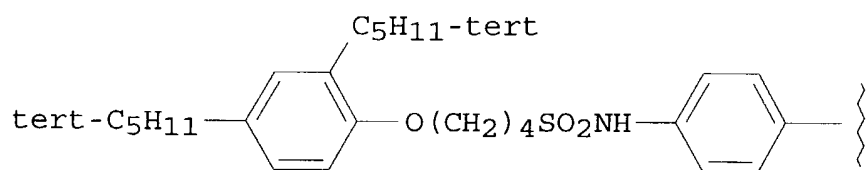
123:241890 **Silver halide photographic**

materials useful for platemaking. Ishikawa, Wataru (Konishiroku  
Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 07159916 A2

**19950623** Heisei, 20 pp. (Japanese). CODEN: JKXXAF.

APPLICATION: JP 1993-306759 19931207.

GI



I

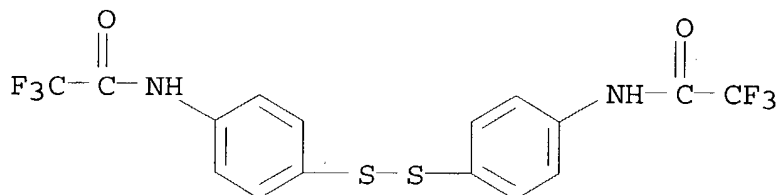
AB The title materials, contg. .gtoreq.1 hydrazine deriv. in the **Ag halide** emulsion layer and/or hydrophilic colloid layer, contain a compd. R<sub>1</sub>X<sub>1</sub>R<sub>2</sub> [R<sub>1</sub>, R<sub>2</sub> = (substituted) alkyl, (substituted) aryl; X<sub>1</sub>, X<sub>2</sub> = S, Se, Te; R<sub>1</sub>, R<sub>2</sub>, X<sub>1</sub>, and X<sub>2</sub> may form a ring]. The materials provide high-contrast and high-resoln. **images** without black spots even if processed continuously with **developing** solns. of pH less than 11.0. Thus, a **photog.** film was prepd. by using a Ag(Br,Cl) emulsion contg. a hydrazine deriv. (I) and (PhS)<sub>2</sub>.

IT 131042-42-7 168771-74-2

(**photog.** film contg. hydrazine deriv. and sulfur or selenium or tellurium compd.)

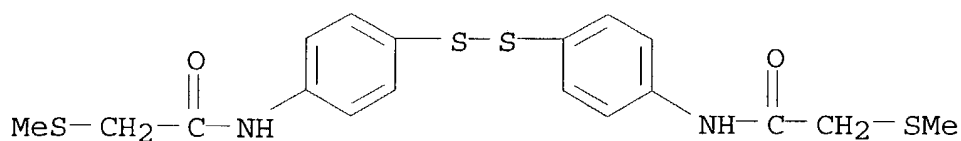
RN 131042-42-7 HCA

CN Acetamide, N,N'-(dithiodi-4,1-phenylene)bis[2,2,2-trifluoro- (9CI)  
(CA INDEX NAME)



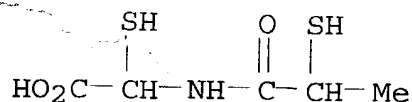
RN 168771-74-2 HCA

CN Acetamide, N,N'-(dithiodi-4,1-phenylene)bis[2-(methylthio)- (9CI)  
(CA INDEX NAME)





- IC ICM G03C001-06  
ICS G03C001-33
- CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST hydrazine deriv **photog** material; sulfur selenium tellurium  
compd **photog**
- IT **Photographic** films  
(**photog.** film contg. hydrazine deriv. and sulfur or  
selenium or tellurium compd.)
- IT 882-33-7 5718-98-9 14091-99-7, 1,2-Dithiane-4-carboxylic acid  
16766-10-2 112047-23-1 124013-74-7 **131042-42-7**  
163427-78-9 168771-73-1 **168771-74-2**  
(**photog.** film contg. hydrazine deriv. and sulfur or  
selenium or tellurium compd.)
- L45 ANSWER 10 OF 26 HCA COPYRIGHT 2003 ACS
- 123:241867 Fixing solution for **silver halide**  
**photographic** materials. Tsukada, Kazuya (Konishiroku Photo  
Ind, Japan). Jpn. Kokai Tokkyo Koho JP 07159946 A2 **19950623**  
Heisei, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
1993-309399 19931209.
- AB The title fixing soln. contains .gtoreq.1 compd. M1SCR1R2LnCR3R4SM2  
[R1-4 = H, (substituted) alkyl, CO2H; L = (substituted) alkylene or  
alkenyl, divalent group comprising .gtoreq.1 of O, CONH, CO, and CS;  
M1, M2 = H, alkali metal, acyl, amidino, thiocarbamoyl]. The soln.  
provides high quality **images** without residual Ag and color  
even if large nos. of **photog.** films are processed with the  
soln. by using automatic **developing** machines at a low  
replenishment rate. Thus, [HSCH(CO2H)]2 was used typically for the  
compd.
- IT **168325-21-1**  
(**photog.** fixing soln. contg. mercapto compd.)
- RN 168325-21-1 HCA
- CN Acetic acid, mercapto[(2-mercapto-1-oxopropyl)amino]- (9CI) (CA  
INDEX NAME)



- IC ICM G03C005-38
- CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST mercapto compd fixing soln **photog**
- IT **Photographic** processing  
(**photog.** fixing soln. contg. mercapto compd.)
- IT 59-52-9 540-63-6, 1,2-Ethanedithiol 2150-02-9 2418-14-6  
4076-02-2 5139-01-5 6943-65-3 7634-42-6 17148-96-8,  
Ethanebis(thioic) acid 58428-97-0 88496-83-7,  
1,2,3,4-Butanetetraethiol 168325-20-0 **168325-21-1**

(**photog.** fixing soln. contg. mercapto compd.)

L45 ANSWER 11 OF 26 HCA COPYRIGHT 2003 ACS

122:226649 **Silver halide photographic**

material. Ogyama, Katsushi; Ooki, Nobutaka; Matsumoto, Keisuke  
(Fuji Photo Film Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 06258791  
A2 19940916 Heisei, 61 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 1993-65987 19930303.

AB In the title **photog.** material having .gtoreq.1  
photosensitive **Ag halide** emulsion layers on its  
support, a compd. which contains an N-contg. heterocyclic group and  
will release an alkylthio-contg. bleaching assistant on reaction  
with an oxidized **developing** agent is contained. This  
material requires less bleaching time.

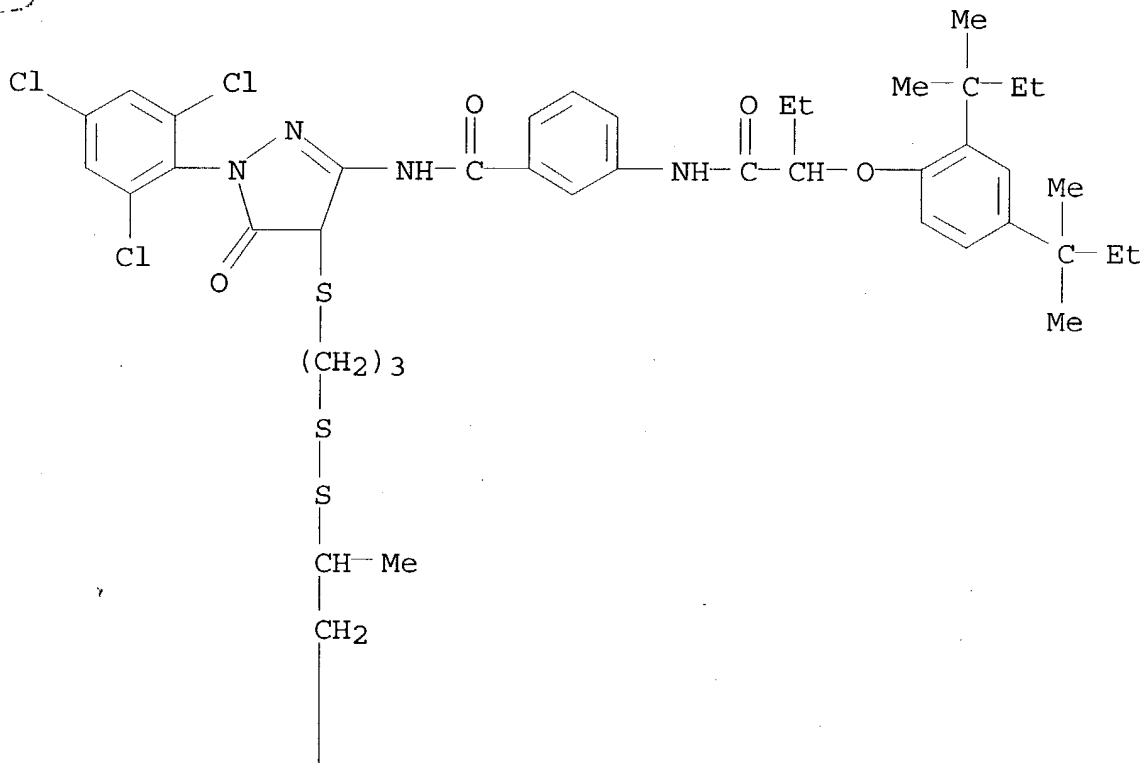
IT 162244-85-1

(**photog.** bleaching assistant-releasing compd.)

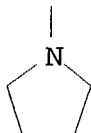
RN 162244-85-1 HCA

CN Benzamide, 3-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-  
oxobutyl]amino]-N-[4,5-dihydro-4-[[3-[[1-methyl-2-(1-  
pyrrolidinyl)ethyl]dithio]propyl]thio]-5-oxo-1-(2,4,6-  
trichlorophenyl)-1H-pyrazol-3-yl]- (9CI) (CA INDEX NAME)

PAGE 1-A



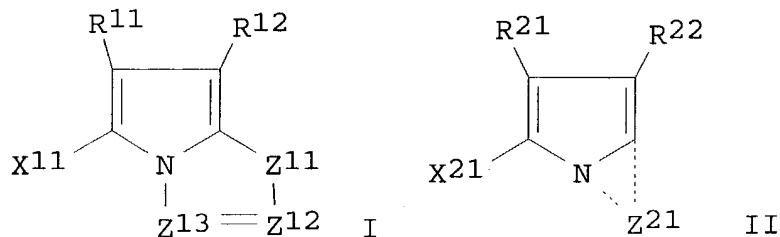
PAGE 2-A



IC ICM G03C007-305  
ICS G03C007-392  
CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)  
ST **photog** bleaching assistant releasing compd  
IT **Photographic** films  
(bleaching assistant-releasing compd. for)  
IT 162244-80-6 162244-81-7 162244-82-8 162244-83-9 162244-84-0  
162244-85-1 162244-86-2 162244-87-3 162244-88-4  
(**photog.** bleaching assistant-releasing compd.)  
IT 162244-89-5P 162244-90-8P  
(**photog.** bleaching assistant-releasing compd.)  
IT 2038-03-1, 4-Morpholineethanamine 162244-92-0  
(**photog.** bleaching assistant-releasing compd. from)  
IT 102580-28-9P 162244-91-9P  
(**photog.** bleaching assistant-releasing compd. from)

L45 ANSWER 12 OF 26 HCA COPYRIGHT 2003 ACS  
121:267599 Color **photographic** photosensitive material  
containing cyan coupler and nucleation promoter. Kuwajima, Shigeru;  
Shimada, Yasuhiro (Fuji Photo Film Co Ltd, Japan). Jpn. Kokai  
Tokkyo Koho JP 05303184 A2 19931116 Heisei, 95 pp.  
(Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-131691 19920424.

GI



AB In the title material, .gtoreq.1 layer(s) of **Ag**  
**halide** emulsion layers or nonphotosensitive layers contains  
a cyan coupler I [R11, R12 = electron-withdrawing group having a  
Hammett's substituent const. .sigma.p >0.20 (the sum of the .sigma.p  
values of R11 and R12 is >0.65); Z11 = NH, CHR13; Z12 = CR14, N; ,

Z13 = CR15, N; R13 = electron-withdrawing group having a Hammett's substituent const.  $\sigma_p > 0.20$ ; R14, R15 = H, substituent; X11 = H, group to be eliminated upon coupling] or II (R21 = H, substituent; R22 = substituent; Z21 = nonmetallic at. group for forming a N-contg. 6-membered heterocyclic ring having  $\sigma_{\text{toreq.1}}$  disocn. group; X21 = H, group to be eliminated upon coupling) and a fogging agent, a **development** promoter, or compds. for releasing their precursors corresponding to **development** Ag during **development**. The material provides **images** having improved high max. d. and low min. d. and is suited for making color proofs.

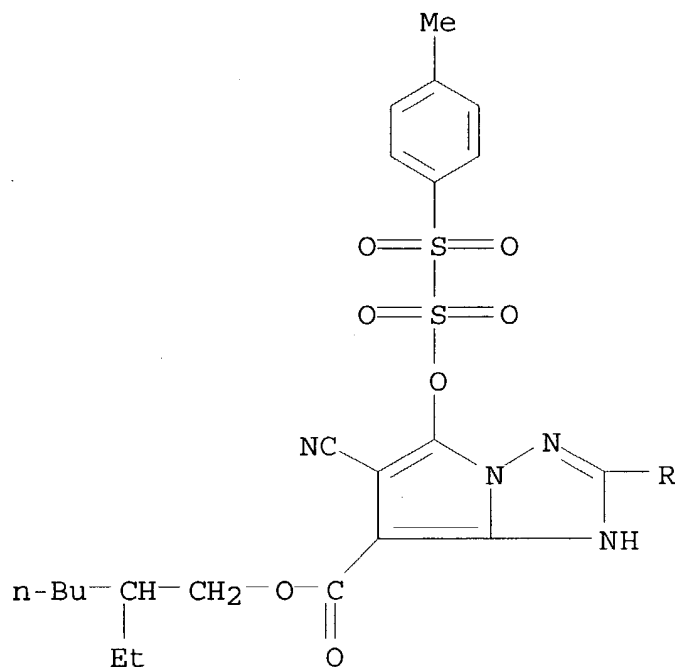
IT 158686-23-8

(cyan **photog.** coupler, for **images** having improved high max. d. and low min. d.)

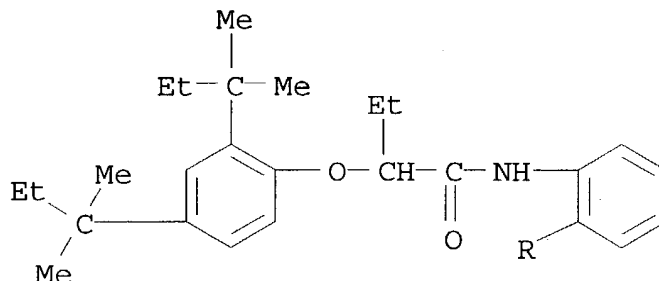
RN 158686-23-8 HCA

CN 1H-Pyrrolo[1,2-b][1,2,4]triazole-7-carboxylic acid, 2-[2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxobutyl]amino]phenyl]-6-cyano-5-[[[4-methylphenyl]disulfonyl]oxy]-, 2-ethylhexyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



- IC ICM G03C007-38  
ICS G03C001-485; G03C001-83; G03C007-305; G03C007-407; G03C007-413; G03F003-10
- CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST silver color **photog** photosensitive material; cyan **photog** coupler fogging agent; **development** accelerator color **photog** material
- IT **Photographic** paper  
(color, for **images** having improved high max. d. and low min. d.)
- IT **Photographic** couplers  
(cyan, for **images** having improved high max. d. and low min. d.)
- IT 151645-00-0 154021-62-2 158686-23-8 158739-39-0  
(cyan **photog.** coupler, for **images** having improved high max. d. and low min. d.)
- IT 151019-65-7P 151645-02-2P  
(cyan **photog.** coupler, prepn. of)
- IT 113740-95-7 117074-26-7 146656-19-1  
(fogging agent- or **development** promoter-releasing compd.)
- IT 146822-29-9P 151019-75-9P 151019-76-0P 151645-01-1P  
(prepn. and reaction of, for cyan **photog.** coupler)
- L45 ANSWER 13 OF 26 HCA COPYRIGHT 2003 ACS
- 121:121607 **Photographic** process for forming heat-transferable dye **images** using polymeric couplers. Texter, John; Chen, Tien Teh; White, Ronald Henry (Eastman Kodak Co., USA). Eur. Pat. Appl. EP 582988 A2 19940216, 43 pp. DESIGNATED STATES: R: BE, CH, DE, FR, GB, IT, LI, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1993-112735 19930809. PRIORITY: US 1992-927691 19920810.
- AB A process is disclosed for forming a dye **image** including the steps of exposing a **photog.** element comprising a support bearing a photosensitive **silver halide** emulsion layer contg. a polymeric color coupler capable of forming a heat-transferable dye upon **development**, wherein the

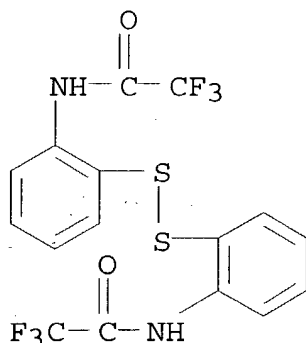
polymeric color coupler is of the formula COUPLB wherein COUP represents a coupler moiety of forming a heat-transferable dye upon reaction of the moiety with an oxidn. product of a color **developer**; L is a divalent linking group which is sepd. from COUP upon reaction of the coupler moiety with an oxidn. product of a color **developer**; and B represents the polymeric backbone, **developing** the exposed element with a color **developer** soln. to form a heat-transferable dye **image**, heating the **developed** element to thereby transfer the dye **image** from the emulsion layer to a dye-receiving layer, where the dye-receiving layer is a part of the **photog.** element or a part of a sep. dye-receiving element brought into contact with the **photog.** element, and sepg. the emulsion layer from the dye-receiving layer contg. the transferred dye **image**.

IT 91359-02-3

(reaction of, in prepg. polymeric **photog.** coupler)

RN 91359-02-3 HCA

CN Acetamide, N,N'-(dithiodi-2,1-phenylene)bis[2,2,2-trifluoro- (9CI)  
(CA INDEX NAME)



IC ICM G03C007-327

ICS G03C008-40; G03C008-10

ICA C08F020-36; C08F020-60

CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)

ST heat transferable dye **image photog**; polymeric  
**photog** coupler heat transferable dye

IT **Photographic** couplers

(polymeric, for forming heat-transferable dye **images**)

IT **Photographic** films

(color, for forming heat-transferable dye **images**)

IT 62609-85-2P 156989-70-7P 156989-71-8P 156989-72-9P

156989-73-0P 156989-74-1P 156989-77-4P 156989-81-0P

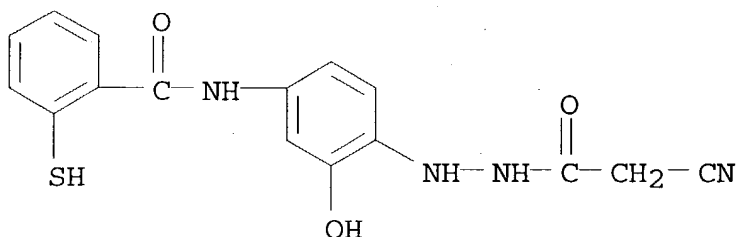
156989-82-1P

(prepn. and reaction of, in prepg. polymeric **photog.**  
coupler)

IT 156989-78-5P 156989-79-6P 156989-80-9P

(prepn. and use of, as cyan **photog.** coupler)

- IT 156989-83-2P 156989-84-3P  
(prepn. and use of, as magenta **photog.** coupler)
- IT 156989-75-2P 156989-76-3P  
(prepn. and use of, as yellow **photog.** coupler)
- IT 106-74-1, Ethoxyethyl acrylate 141-32-2 369-36-8,  
2-Fluoro-5-nitroaniline 814-68-6, Acryloyl chloride 5165-97-9  
6268-48-0 38486-53-2 63134-34-9 **91359-02-3**  
92484-90-7 96860-14-9  
(reaction of, in prepg. polymeric **photog.** coupler)
- L45 ANSWER 14 OF 26 HCA COPYRIGHT 2003 ACS
- 115:170812 A super-high contrast negative **silver halide photographic** light-sensitive material containing hydrazine derivatives for photomechanical process. Goto, Takahiro; Kato, Kazunobu; Okamura, Hisashi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 02311840 A2 **19901227** Heisei, 31 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1989-134155 19890526.
- AB A super-high contrast neg. **Ag halide** photosensitive material comprises on a support .gtoreq.1 **Ag halide** emulsion layer which or other hydrophilic colloid layer contains hydrazine derivs. XNHNHCOYEWG (X = aliph., arom., or heterocyclyl group; Y = CHR, NH; R = H, X, EWG; EWG = electron withdrawing group; or YEWG forming a ring;) and R1NA1NA2G1R2 [R1 = aliph. or arom. group; R2 = H, alkyl, aryl, alkoxy, aryloxy, NH2, CONH2, oxycarbonyl; G1 = CO, SO2, SO2O, P(O)R2, NHCH2; A1 = A2 = H; or one of A1, A2 = H and the other = (un)substituted alkylsulfonyl, arylsulfonyl, or acyl]. This **photog.** material maintains the max. **image d.** (Dmax) in spite of the degrdn. (particularly redn. of sulfite ion concn.) of a **developing** soln.
- IT **136322-63-9**  
(**photog.** emulsion contg., for photomech. process)
- RN 136322-63-9 HCA
- CN Acetic acid, cyano-, 2-[2-hydroxy-4-[(2-mercaptobenzoyl)amino]phenyl]hydrazide (9CI) (CA INDEX NAME)



- IC ICM G03C001-06
- CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST superhigh contrast neg **photog** material; hydrazine deriv  
neg **photog** material; photomech plate hydrazine deriv;

developer degrading sulfite ion concn

IT **Photographic emulsions**

(high-contrast, contg. hydrazine derivs., for photomech. process)

IT 119191-99-0 120381-01-3 121039-20-1 121039-22-3 121039-30-3  
135767-14-5 135767-15-6 135767-24-7 136322-61-7 136322-62-8  
136322-63-9 136322-64-0 136322-65-1

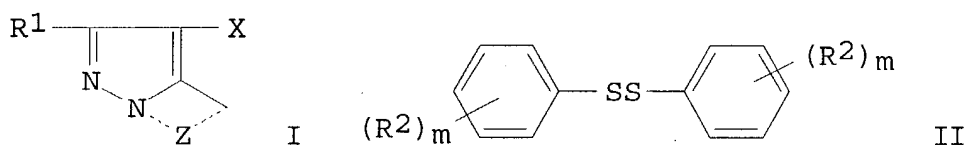
(**photog.** emulsion contg., for photomech. process)

L45 ANSWER 15 OF 26 HCA COPYRIGHT 2003 ACS

114:14794 **Silver halide photographic**

material containing pyrazoloazole magenta coupler and **image** stabilizer. Seto, Nobuo; Morigaki, Masakazu (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 0202338 A2 19900125 Heisei, 31 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-173475 19880712.

GI



AB The title color **photog.** material contains .gtoreq.1 pyrazoloazole coupler having the formula I [R<sup>1</sup> = H, a substituent; X = H, a group to be released upon coupling reaction with an oxidized arom. primary amine **developer**; Z = a group necessary to form a N-contg. heterocyclic ring] and .gtoreq.1 compd. having the formula II [R<sup>2</sup> = H, halogen, alkyl, alkoxy, alkylthio, amino, acylamino, sulfoneamido, alkoxycarbonyl, aryloxycarbonyl, acyl, carbamoyl, sulfamoyl, sulfonyl, cyano, heterocyclyl, OH, aryl; m = 1-5]. II is used as an **image** stabilizer.

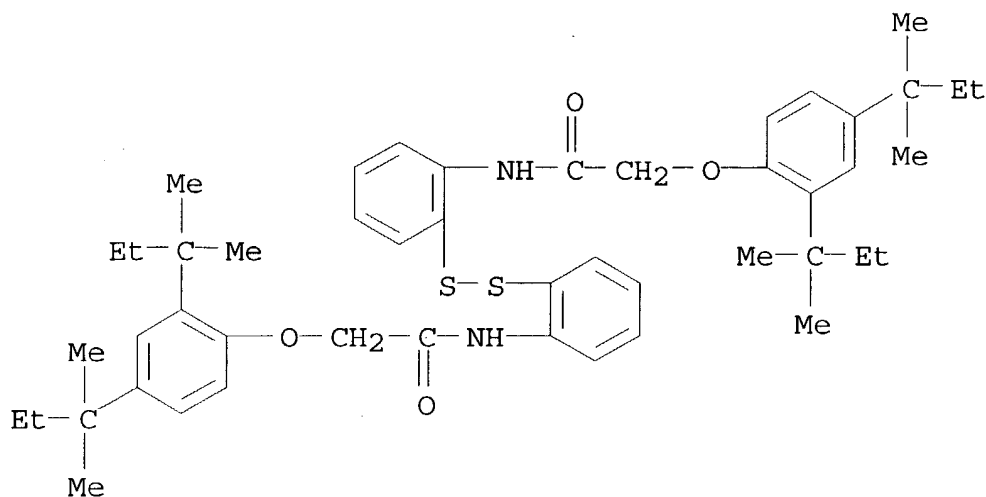
IT 130896-91-2

(**image** stabilizer, for color **photog.** material)

RN 130896-91-2 HCA

CN Acetamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)





- IC ICM G03C007-38  
ICS G03C007-26; G03C007-392
- CC **74-2** (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST pyrazoloazole magenta coupler; diphenyl disulfide **image**  
stabilizer; disulfide **image** stabilizer
- IT **Photographic** stabilizers  
(di-Ph disulfide derivs. as)
- IT **Photographic** couplers  
(magenta, pyrazoloazoles as)
- IT 89447-58-5 117137-41-4 122745-04-4 **130896-91-2**  
130896-92-3  
(**image** stabilizer, for color **photog.**  
material)
- IT 113463-09-5 130896-90-1  
(magenta **photog.** coupler)

L45 ANSWER 16 OF 26 HCA COPYRIGHT 2003 ACS

112:226649 **Silver halide** color **photographic**  
materials containing polymeric couplers. Hirano, Tsumoru (Fuji  
Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 01134357 A2  
**19890526** Heisei, 49 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 1987-292598 19871119.

AB The title materials, showing good coloration, storability, and  
sharpness contain oil-sol. polymeric coupler EAxByX [E = C.gtoreq.2  
monovalent group; A = ethylenically unsatd. monomer repeating unit  
with coupler pendant group (this unit may be formed from .gtoreq.2  
different monomers that produce the same color upon coupling with  
arom. primary amine **developing** agent oxidn. product); B =  
repeating unit of noncoloring comomer(s); E or B may contain F or  
group that bond with the binder directly or via a film hardener; X =  
monovalent group; x:y = 10:90 to 150:0].

IT **125870-66-8P 126009-96-9P**

(photog. couplers, manufg. of)

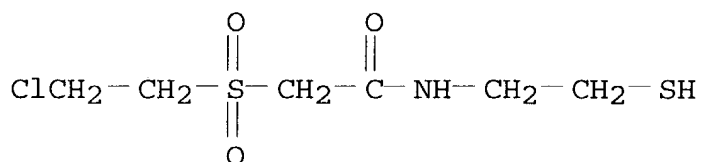
RN 125870-66-8 HCA

CN 2-Propenoic acid, 2-methyl-, butyl ester, telomer with  
 2-[(2-chloroethyl)sulfonyl]-N-(2-mercaptoethyl)acetamide and  
 3-[3'-[(2,2-dimethyl-1-oxopropyl)amino]-4',5'-dihydro-5'-oxo-1'-(2,4,6-trichlorophenyl)[1,4'-bi-1H-pyrazol]-4-yl]propyl 2-propenoate  
 (9CI) (CA INDEX NAME)

CM 1

CRN 125450-49-9

CMF C6 H12 Cl N O3 S2



CM 2

CRN 125870-65-7

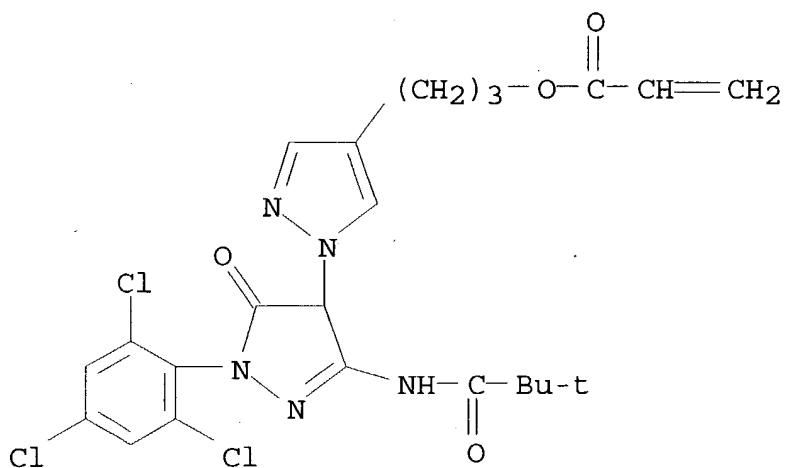
CMF (C23 H24 Cl3 N5 O4 . C8 H14 O2)x

CCI PMS

CM 3

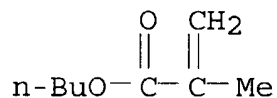
CRN 98209-27-9

CMF C23 H24 Cl3 N5 O4



CM 4

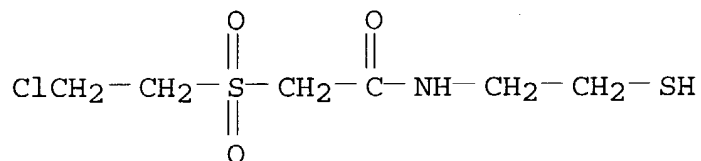
CRN 97-88-1  
CMF C8 H14 O2



RN 126009-96-9 HCA  
CN 2-Propenoic acid, ethyl ester, telomer with 2-[(2-chloroethyl)sulfonyl]-N-(2-mercaptoethyl)acetamide and 2,2,3,4,4,4-heptafluoro-N-[2-hydroxy-4-[(1-oxo-2-propenyl)amino]phenyl]butanamide (9CI) (CA INDEX NAME)

CM 1

CRN 125450-49-9  
CMF C6 H12 Cl N O3 S2

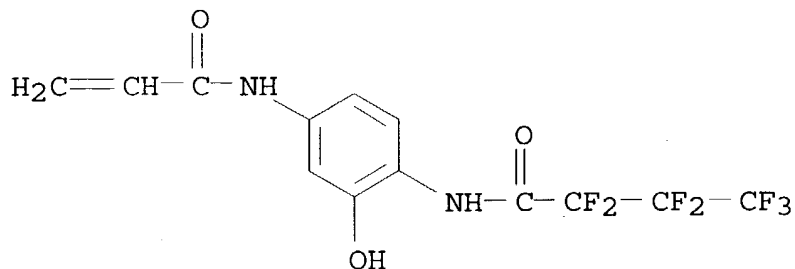


CM 2

CRN 113922-12-6  
CMF (C13 H9 F7 N2 O3 . C5 H8 O2)x  
CCI PMS

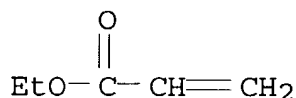
CM 3

CRN 113922-11-5  
CMF C13 H9 F7 N2 O3



CM 4

CRN 140-88-5  
CMF C5 H8 O2



IC ICM G03C007-32  
CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)  
ST **silver halide** color **photog** material;  
telomer **photog** color coupler  
IT Telomers  
(**photog.** couplers, manufg. of)  
IT **Photographic** couplers  
(telomer, manufg. of)  
IT 79-10-7DP, 2-Propenoic acid, perfluoroalkylethyl esters, telomer  
with acrylamide group-contg. coupler and thiol 103-11-7DP, telomer  
with acrylamide group-contg. coupler and thiol and  
perfluoroalkylethyl acrylate 111-88-6DP, 1-Octanethiol, telomer  
with acrylamide group-contg. couplers and perfluoroalkylethyl  
acrylate 141-32-2DP, telomer with acrylamide group-contg. coupler  
and thiol and perfluoroalkylethyl acrylate 34143-74-3DP, telomer  
with acrylamide group-contg. couplers and ethylhexylacrylate and  
perfluoroalkylethyl acrylate and perfluorooctylethanethiol ,  
68805-73-2DP, telomer with ethylhexyl acrylate and  
perfluoroalkylethyl acrylate and perfluorooctylethane thiol  
89883-78-3DP, telomer with Bu acrylate and N-  
bis(perfluoroalkylethoxycarbonyl)phenylthioacetamide  
113883-99-1DP, telomer with Bu acrylate and N-  
bis(perfluoroalkylethoxycarbonyl)phenylthioacetamide  
113922-11-5DP, telomer with Bu acrylate and perfluoroalkylethyl  
mercaptoacetate 120283-46-7DP, telomer with octanethiol and  
perfluoroalkylethyl acrylate 125816-83-3DP, perfluoroalkylethyl  
esters, telomer with acrylamide group-contg. coupler and thiol  
125870-52-2P 125870-54-4P 125870-56-6P 125870-58-8P  
125870-61-3P 125870-63-5P 125870-64-6P **125870-66-8P**  
125870-67-9P 125870-69-1P 125870-72-6P 125984-57-8P  
125984-59-0P 125984-61-4P 125992-07-6P 126009-95-8P  
**126009-96-9P** 126037-65-8P 127210-95-1P  
(**photog.** couplers, manufg. of)

L45 ANSWER 17 OF 26 HCA COPYRIGHT 2003 ACS

112:148936 **Silver halide** color **photographic**  
materials. Sakagami, Megumi; Yamanochi, Junichi (Fuji Photo Film  
Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 01142632 A2  
**19890605** Heisei, 72 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 1987-301889 19871130.

AB The title materials providing sharp color **images** with  
improved graininess and latent **image** storability contain,  
in the same **Ag halide** emulsion layer, .gtoreq.1

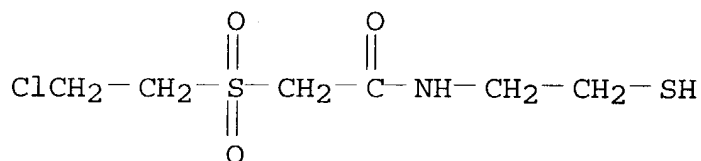
polymeric coupler prepd. in the presence of a chain-transfer agent with chain-transfer const. 0.01-50 and .gtoreq.1 compds. that do not form dyes with arom. primary amine **developing** agent oxidn. product.

IT **125450-49-9**

(chain-transfer agents, in polymn. of **photog.** couplers)

RN 125450-49-9 HCA

CN Acetamide, 2-[(2-chloroethyl)sulfonyl]-N-(2-mercaptoethyl)- (9CI)  
(CA INDEX NAME)



IC ICM G03C007-32

ICS G03C007-26

CC **74-2** (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35

ST **silver halide** color **photog** coupler;  
telomer coupler color **photog**

IT Thiols, uses and miscellaneous

(chain-transfer agents, in polymn. of **photog.** couplers)

IT Telomers

(manuf. and use of, as **photog.** couplers, for sharp  
color **images** with improved graininess and latent  
**image** storability)

IT Chain-transfer agents

(mercaptans, in polymn. of **photog.** couplers)

IT **Photographic** couplers

(telomer, for sharp color **images** with improved  
graininess and latent **image** storability)

IT 68-11-1D, fluoroalkyl esters 107-03-9, 1-Propanethiol 109-79-5,  
1-Butanethiol 111-88-6, 1-Octanethiol 112-55-0, 1-Dodecanethiol  
34143-74-3 45357-98-0, Oxiranemethanethiol **125450-49-9**

(chain-transfer agents, in polymn. of **photog.** couplers)

IT 112-16-3DP, Dodecanoyl chloride, reaction products with telomers  
112-64-1DP, Tetradecanoyl chloride, reaction products with telomers  
112-67-4DP, Hexadecanoyl chloride, reaction products with telomers  
124-22-1DP, 1-Dodecanamine, reaction products with telomers  
6166-47-8DP, Octanoyl bromide, reaction products with telomers  
113883-78-6P 113883-86-6P 113883-87-7P 113883-90-2P  
113883-93-5P 113921-98-5P 113922-02-4P 113922-10-4P  
113922-16-0P 125489-12-5DP, reaction products with telomeric  
**photog.** couplers 125489-13-6DP, reaction products with  
telomers 125489-67-0P 125489-71-6P 125489-72-7P 125489-74-9P  
125489-75-0P 125489-77-2P 125489-78-3P 125489-79-4P  
125489-80-7P 125489-83-0P 125489-84-1DP, reaction products with  
tetradecanoyl chloride 125489-86-3DP, reaction products with

tetradecanoyl chloride 125489-87-4DP, reaction products with dodecanoic chloride 125489-89-6DP, reaction products with dodecanamine 125489-90-9DP, reaction products with dodecanoic chloride 125489-91-0DP, reaction products with dodecanoic chloride 125489-93-2DP, reaction products with phenoxyhexanoate chloride 125489-96-5DP, reaction products with dodecanoate chloride 125489-99-8DP, reaction products with tetradecanoate chloride 125490-00-8DP, reaction products with (di-tert-pentylphenoxy)butanoate chloride 125490-01-9DP, reaction products with dodecanoate chloride 125490-02-0DP, reaction products with dodecanoate chloride 125490-03-1DP, reaction products with tetradecanoate chloride 125490-06-4DP, reaction products with hexadecanoate chloride 125490-07-5DP, reaction products with tetradecanoate chloride 125490-09-7DP, reaction products with hexadecanoate chloride 125490-10-0DP, reaction products with tetradecanoate chloride 125490-12-2DP, reaction products with tetradecanoate chloride 125490-15-5DP, reaction products with octanoate chloride 125623-06-5P 125807-43-4P 125913-09-9P 125913-46-4P 125935-95-7P

(manuf. and use of, as **photog.** couplers, for sharp color **images** with improved graininess and latent **image** storability)

IT 79-10-7DP, 2-Propenoic acid, fluoroalkyl esters, polymer with **photog.** coupler compds. 5165-97-9DP, polymer with **photog.** coupler compds. 118038-26-9DP, polymer with **photog.** coupler compds. 125449-65-2P 125449-66-3P 125449-67-4P 125449-69-6DP, polymers with fluoroalkylacrylate and sodium acrylamidohexanoate 125449-71-0P 125449-72-1P 125449-73-2P 125449-74-3P 125449-76-5P 125449-77-6P 125449-78-7P 125449-79-8P 125449-80-1P 125449-81-2P 125449-82-3P 125449-85-6P 125449-87-8DP, polymer with fluoroalkylacrylate and acrylamide derivs. 125450-35-3P 125450-51-3P 125466-59-3P 125635-18-9P 125649-47-0P

(manuf. of, for **photog.** couplers)

IT 903-19-5, 2,5-Di-tert-octylhydroquinone 24730-07-2 51025-12-8 87667-24-1 87667-27-4 89131-33-9 99107-49-0 121700-10-5  
(noncoloring **photog.** couplers, telomeric couplers contg., for sharp color **images** with improved graininess and latent **image** storability)

L45 ANSWER 18 OF 26 HCA COPYRIGHT 2003 ACS

112:148934 **Silver halide color photographic**

materials containing polymeric couplers. Hirano, Tsumoru; Yamanochi, Junichi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 01134453 A2 19890526 Heisei, 51 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1987-294675 19871120.

AB The title materials showing good coloration and **image** sharpness contain water-sol. polymer coupler(s) EAxByX (E = C.gtoreq.2 monovalent group; A = repeating units of .gtoreq.1 ethylenically unsatd. monomers forming dyes of the same shade upon coupling with arom. primary amine **developing** oxidn. product; B = noncoloring ethylenically unsatd. comonomer unit; X =

monovalent group; x:y = 10:90-90:10).

IT 125450-50-2P

(manuf. and use of, as **photog.** couplers, for improved coloration and **image** sharpness)

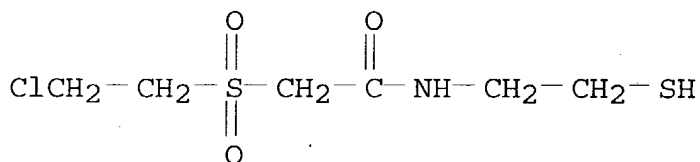
RN 125450-50-2 HCA

CN 2-Propenoic acid, 2-methyl-, methyl ester, telomer with 2-[(2-chloroethyl)sulfonyl]-N-(2-mercaptoethyl)acetamide, 3-[3'-[(2,2-dimethyl-1-oxopropyl)amino]-4,5'-dihydro-5'-oxo-1'-(2,4,6-trichlorophenyl)[1,4'-bi-1H-pyrazol]-4-yl]propyl 2-propenoate and 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid monosodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 125450-49-9

CMF C6 H12 Cl N O3 S2



CM 2

CRN 125449-78-7

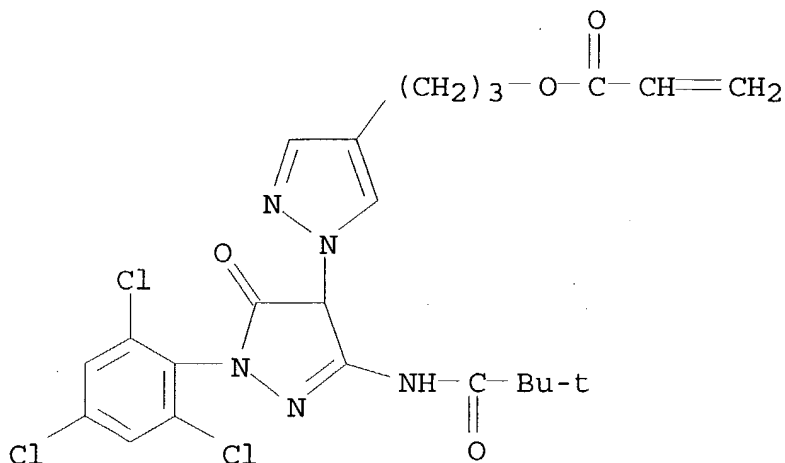
CMF (C23 H24 Cl3 N5 O4 . C7 H13 N O4 S . C5 H8 O2 . Na)x

CCI PMS

CM 3

CRN 98209-27-9

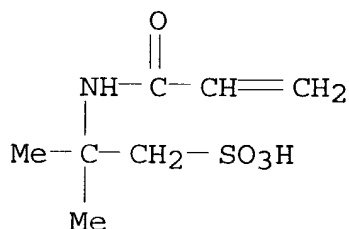
CMF C23 H24 Cl3 N5 O4



CM 4

CRN 5165-97-9

CMF C7 H13 N O4 S . Na

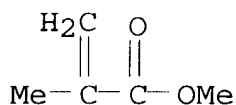


● Na

CM 5

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03C007-32

CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35ST telomer coupler color **photog**; **silver**  
**halide photog** color coupler

IT Telomers

(manuf. and use of, as **photog.** couplers, for improved  
coloration and **image** sharpness)IT **Photographic** couplers(telomers, for improved coloration and **image** sharpness)

IT	125450-32-0P	125450-34-2P	125450-36-4P	125450-38-6P
	125450-39-7P	125450-43-3P	125450-44-4P	125450-45-5P
	125450-46-6P	125450-48-8P	<b>125450-50-2P</b>	125450-52-4P
	125450-53-5P	125450-55-7P	125450-58-0P	125450-60-4P
	125450-63-7P	125466-67-3P	125466-68-4P	125466-70-8P
	125466-73-1P	125466-77-5P	125490-16-6P	125668-58-8P
	125984-11-4P			

(manuf. and use of, as **photog.** couplers, for improved  
coloration and **image** sharpness)



L45 ANSWER 19 OF 26 HCA COPYRIGHT 2003 ACS

109:180315 Bleach-promoting agent for **silver halide** color **photographic** processing. Yamashita, Kiyoshi (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 63073247 A2 **19880402** Showa, 21 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1986-218462 19860917.

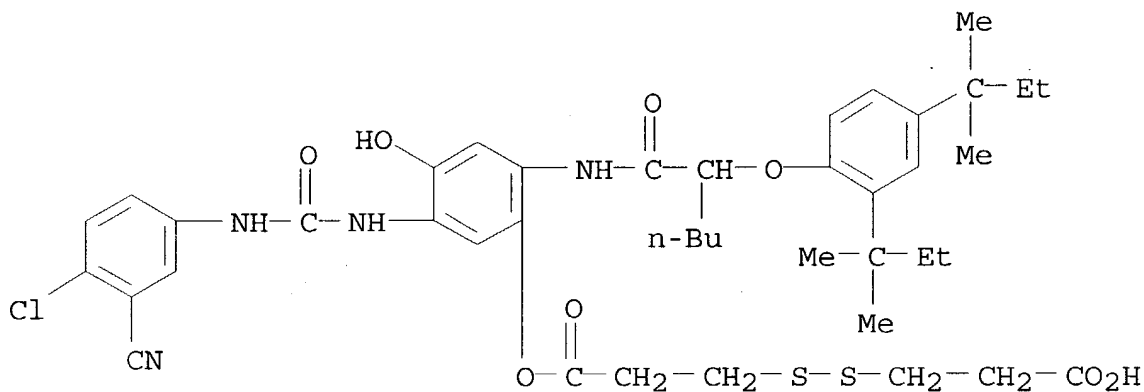
AB A method for processing a **Ag halide** color **photog.** material contg. a compd. which releases a fogging agent (or precursor) or a **development** inhibitor (or precursor) imagewise according to the amt. of **developed** Ag during **development** is claimed wherein the **developed** material is bleached or bleach-fixed in the presence of a compd. which releases a bleach-promoting agent through a reaction with an oxidized color **developing** agent.

IT 116369-32-5 117074-37-0 117074-38-1  
117074-40-5

(bleach promoter-releasing coupler, processing of color **photog.** material in presence of)

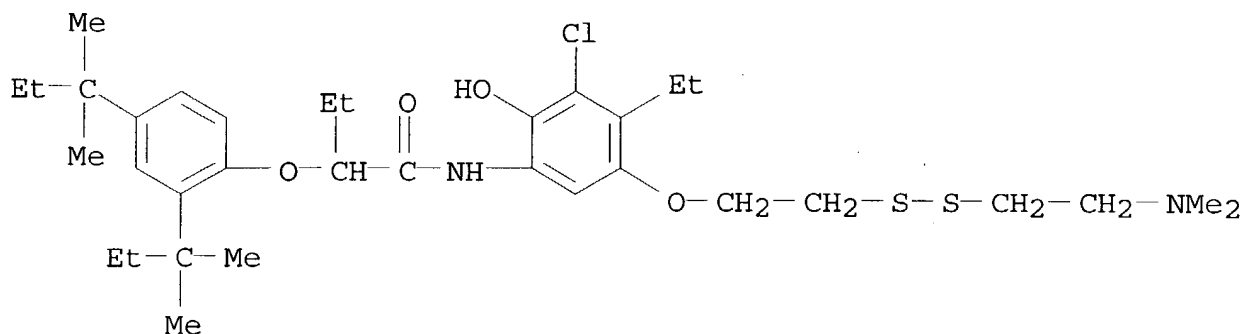
RN 116369-32-5 HCA

CN Propanoic acid, 3-[(2-carboxyethyl)dithio]-, 1-[2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]-5-[[[(4-chloro-3-cyanophenyl)amino]carbonyl]amino]-4-hydroxyphenyl] ester (9CI) (CA INDEX NAME)



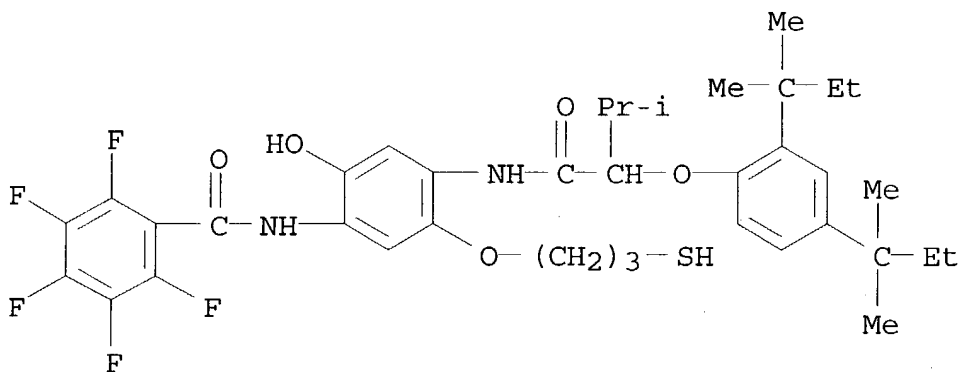
RN 117074-37-0 HCA

CN Butanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[3-chloro-5-[2-[[2-(dimethylamino)ethyl]dithio]ethoxy]-4-ethyl-2-hydroxyphenyl]- (9CI) (CA INDEX NAME)



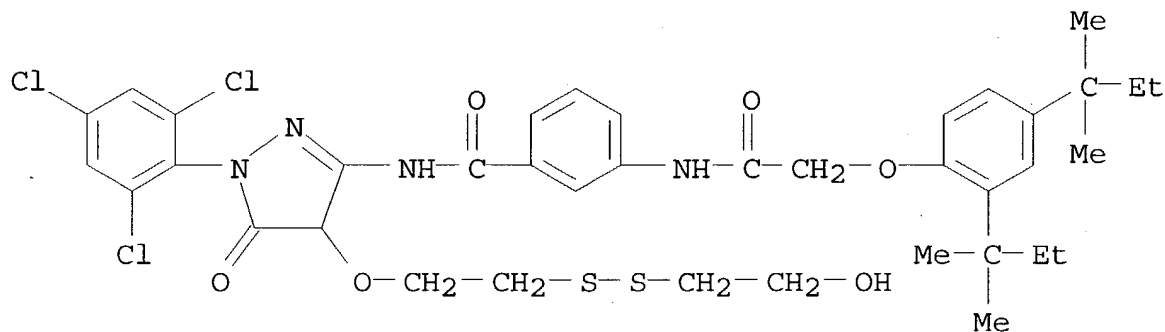
RN 117074-38-1 HCA

CN Benzamide, N-[4-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-3-methyl-1-oxobutyl]amino]-2-hydroxy-5-(3-mercaptopropoxy)phenyl]-2,3,4,5,6-pentafluoro- (9CI) (CA INDEX NAME)



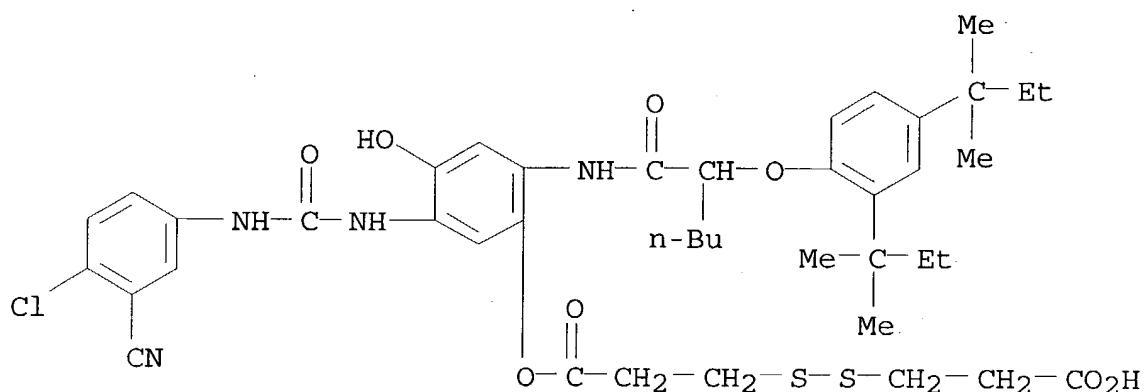
RN 117074-40-5 HCA

CN Benzamide, 3-[[[2,4-bis(1,1-dimethylpropyl)phenoxy]acetyl]amino]-N-[4,5-dihydro-4-[2-[(2-hydroxyethyl)dithio]ethoxy]-5-oxo-1-(2,4,6-trichlorophenyl)-1H-pyrazol-3-yl]- (9CI) (CA INDEX NAME)



IC ICM G03C007-42

- ICS G03C007-26; G03C007-30
- CC **74-2** (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST bleach accelerator releaser **photog** processing
- IT **Photographic** couplers  
(fogging agent-releasing, processing of color films contg.)
- IT **Photographic** processing  
(use of bleach accelerator releaser in, of fogging agent  
releaser-contg. color films)
- IT 116369-29-0 116369-30-3 116369-31-4 **116369-32-5**  
116369-33-6 116369-34-7 116369-35-8 116369-36-9 116369-37-0  
116369-38-1 116369-39-2 116400-38-5 116983-94-9 117074-36-9  
**117074-37-0 117074-38-1** 117074-39-2  
**117074-40-5** 117074-41-6 117074-42-7 117074-43-8  
117074-44-9 117074-45-0 117074-46-1 117074-47-2 117074-48-3  
117074-49-4 117074-50-7 117074-51-8  
(bleach promoter-releasing coupler, processing of color  
**photog.** material in presence of)
- IT 90178-02-2 90208-16-5 90208-19-8 92989-62-3 93610-14-1  
93641-23-7 97802-42-1 98312-76-6 98349-00-9 99049-08-8  
99049-12-4 99049-20-4 99119-43-4 99893-19-3 101926-09-4  
105488-33-3 111283-72-8 112537-65-2 113740-94-6 115721-07-8  
116646-25-4 117074-26-7 117074-27-8 117074-28-9 117074-29-0  
117074-30-3 117074-31-4 117074-32-5 117074-33-6 117074-34-7  
117074-35-8  
(fogging agent-releasing coupler, processing of color  
**photog.** material contg., in presence of bleach promoter)
- L45 ANSWER 20 OF 26 HCA COPYRIGHT 2003 ACS
- 109:119551 **Silver halide** color **photographic**  
material containing bleach-promoter-releasing couplers. Kida,  
Shuji; Nakagawa, Satoshi; Kunieda, Sunao (Konica Co., Japan). Jpn.  
Kokai Tokkyo Koho JP 63070854 A2 **19880331** Showa, 14 pp.  
(Japanese). CODEN: JKXXAF. APPLICATION: JP 1986-216559 19860912.
- AB Claimed is a **Ag halide** color **photog.**  
material contg. bleach promoter-releasing couplers QTlO(CO)mRSR' [Q  
= coupler residue capable of reacting with a color  
**developing** agent; T = timing group; R = linking group; R1 =  
H, CN, COR3, CSR3, CONR3R4, CSNR3R4, heterocyclyl, C(:NR6)NR4R5,  
SR3, NR3R4; R3 = alkyl, aryl; R4,R5,R6 = H, alkyl, aryl; l, m = 0,  
1], which improve removal of Ag during processing.
- IT **116369-32-5**  
(**photog.** couplers, bleach promoter-releasing, for  
improved silver removal)
- RN 116369-32-5 HCA
- CN Propanoic acid, 3-[(2-carboxyethyl)dithio]-, 1-[2-[[2-[2,4-bis(1,1-  
dimethylpropyl)phenoxy]-1-oxohexyl]amino]-5-[[[(4-chloro-3-  
cyanophenyl)amino]carbonyl]amino]-4-hydroxyphenyl] ester (9CI) (CA  
INDEX NAME)



- IC ICM G03C007-32  
ICS G03C007-26
- CC 74-2 (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)
- ST bleach promoter releasing **photog** coupler
- IT **Photographic** couplers  
(bleach promoter-releasing, for improved silver removal)
- IT 116369-30-3 116369-31-4 **116369-32-5** 116369-33-6  
116369-34-7 116369-35-8 116369-36-9 116369-37-0 116369-38-1  
116400-38-5  
(**photog.** couplers, bleach promoter-releasing, for  
improved silver removal)
- IT 63023-22-3P 116369-40-5P  
(prepn. and reaction of, **photog.** bleach  
promoter-releasing coupler from)
- IT 116369-29-0P 116369-39-2P  
(prepn. of, as bleach promoter-releasing **photog.**  
coupler, for improved silver removal)
- IT 62-56-6, Thiourea, reactions 540-51-2 31519-22-9 50771-78-3  
51959-14-9 74518-60-8  
(reaction of, **photog.** bleach promoter-releasing coupler  
from)
- L45 ANSWER 21 OF 26 HCA COPYRIGHT 2003 ACS
- 108:46776 **Silver halide** color **photographic**  
material. Sasaki, Masao; Onodera, Kaoru (Konishiroku Photo Industry  
Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 62165654 A2  
**19870722** Showa, 52 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 1986-8406 19860118.
- AB A **photog.** material contg. .gtoreq.1 **Ag**  
**halide** emulsion layers on a support is claimed wherein the  
**Ag halide** emulsion contained in .gtoreq.1 of the  
layers occurs in combination with color **image** forming  
couplers and a compd. DTnL [D = group capable of releasing TnL as a  
function of **Ag halide development**; T =  
group capable of releasing L during or after the release of TnL; L =  
group capable of stabilizing color **image** by complexing

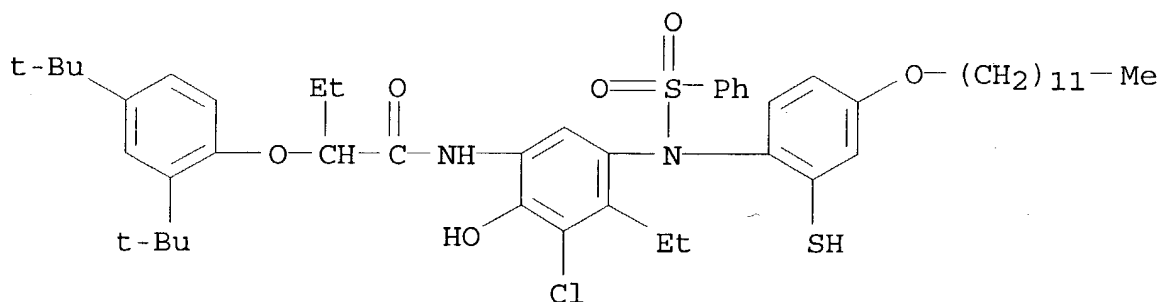
metal ions]. The material has an improved lightfastness without sacrifices in white background.

IT **112367-83-6**

(metal-complexing stabilizer precursor, for color **photog**  
. material)

RN 112367-83-6 HCA

CN Butanamide, 2-[2,4-bis(1,1-dimethylethyl)phenoxy]-N-[3-chloro-5-[[4-(dodecyloxy)-2-mercaptophenyl](phenylsulfonyl)amino]-4-ethyl-2-hydroxyphenyl]- (9CI) (CA INDEX NAME)



IC ICM G03C007-32

ICS G03C007-26

CC **74-2** (Radiation Chemistry, Photochemistry, and  
Photographic and Other Reprographic Processes)

ST chelating stabilizer color **photog** material

IT **Photographic** stabilizers

(metal-complexing precursor for)

IT **Photographic** emulsions

(color, metal-complexing precursor for)

IT 111340-64-8 111340-68-2 112367-81-4 112367-82-5

**112367-83-6** 112367-84-7 112367-85-8 112367-86-9

112367-87-0 112367-88-1 112367-91-6 112367-93-8 112367-94-9

112367-95-0 112388-83-7 112901-34-5

(metal-complexing stabilizer precursor, for color **photog**  
. material)

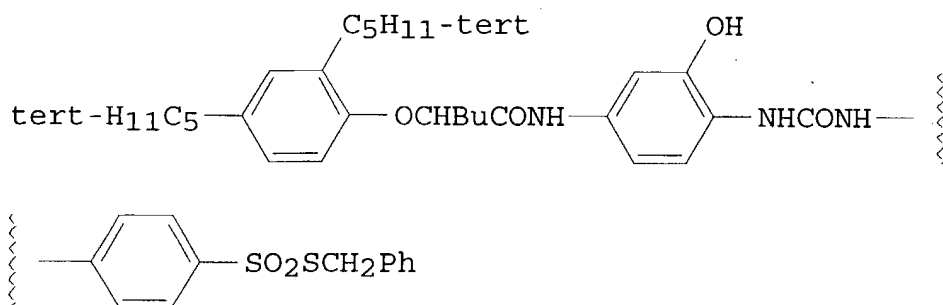
L45 ANSWER 22 OF 26 HCA COPYRIGHT 2003 ACS

104:12992 **Silver halide photographic**

photosensitive material. (Konishiroku Photo Industry Co., Ltd.,  
Japan). Jpn. Kokai Tokkyo Koho JP 60111244 A2 **19850617**

Showa, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
1983-220209 19831121.

GI



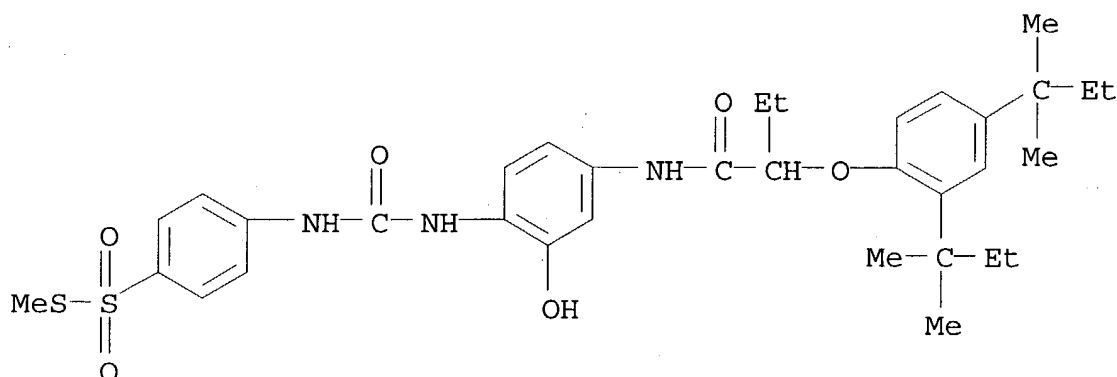
AB A Ag halide photog. material comprises a support and .gtoreq.1 Ag halide emulsion layer contg. a phenol-type cyan coupler in which the phenol ring bears a phenyl-ureido group with a SO<sub>2</sub>SR (R = aliph., arom., heterocyclic group) group at the 2-position, H, or a group releasable on coupling reaction with an oxidized color **developer** at the 4-position and an acylamino group at the 5-position. The material contains a new-type cyan dye-forming coupler which has no unfavorable optical absorption in the green region and little dependence of reactivity on the **developer** compn., such as benzyl alc. content. Thus, a coupler-gelatin dispersion contg. the cyan coupler I and Alkanol B was mixed with a Ag(Br,I) (5% AgI) emulsion and then coated on a cellulose acetate support to form a color **photog.** film. The film was wedge-exposed, color-**developed**, bleached, fixed, and stabilized to give a cyan **image** with sensitivity and max. d. both higher than those of a control using a known coupler. Also, good color reprodn. was obsd. due to the presence of a sharp absorption band in the cyan coupler.

IT 99504-51-5 99504-52-6 99504-54-8  
99504-55-9 99517-92-7

(**photog.** cyan coupler)

RN 99504-51-5 HCA

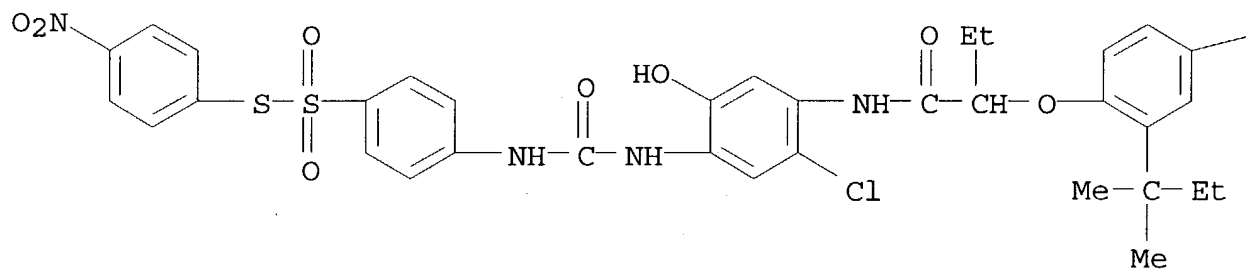
CN Benzenesulfonothioic acid, 4-[[[4-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxobutyl]amino]-2-hydroxyphenyl]amino]carbonyl]amino]-, S-methyl ester (9CI) (CA INDEX NAME)



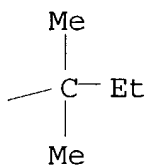
RN 99504-52-6 HCA

CN Benzenesulfonyl 4-[[[4-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxobutyl]amino]-5-chloro-2-hydroxyphenyl]amino]carbonyl]amino-, S-(4-nitrophenyl) ester (9CI)  
(CA INDEX NAME)

PAGE 1-A

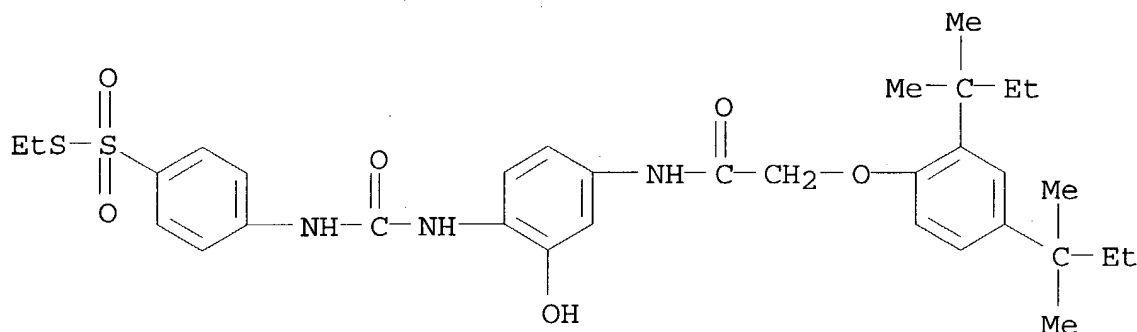


PAGE 1-B

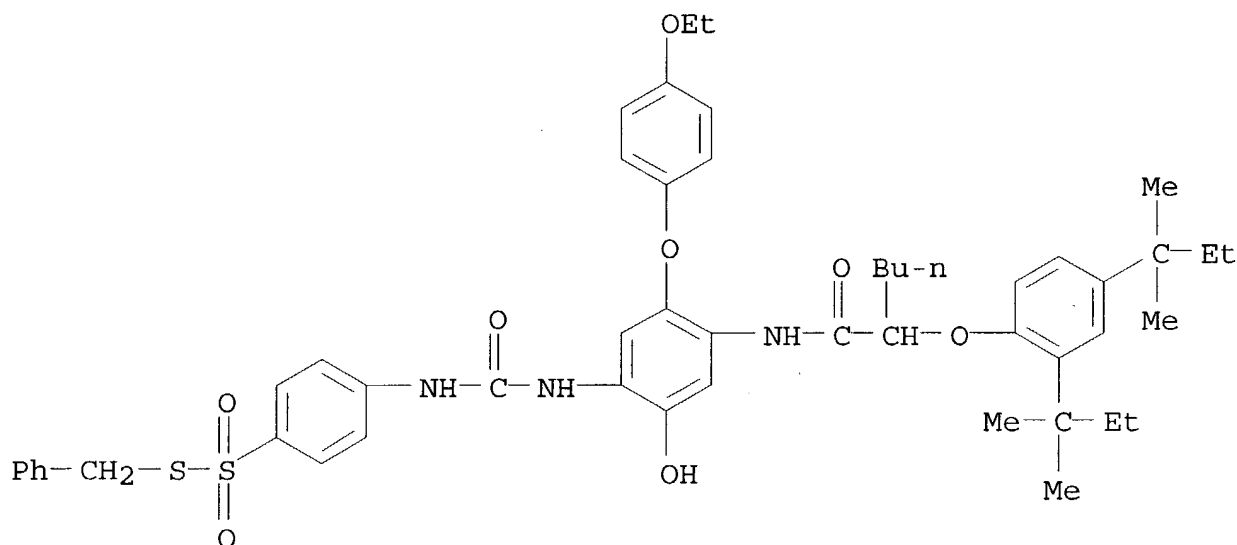


RN 99504-54-8 HCA

CN Benzenesulfonyl 4-[[[4-[[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]acetyl]amino]-2-hydroxyphenyl]amino]carbonyl]amino]-, S-ethyl ester (9CI) (CA INDEX NAME)

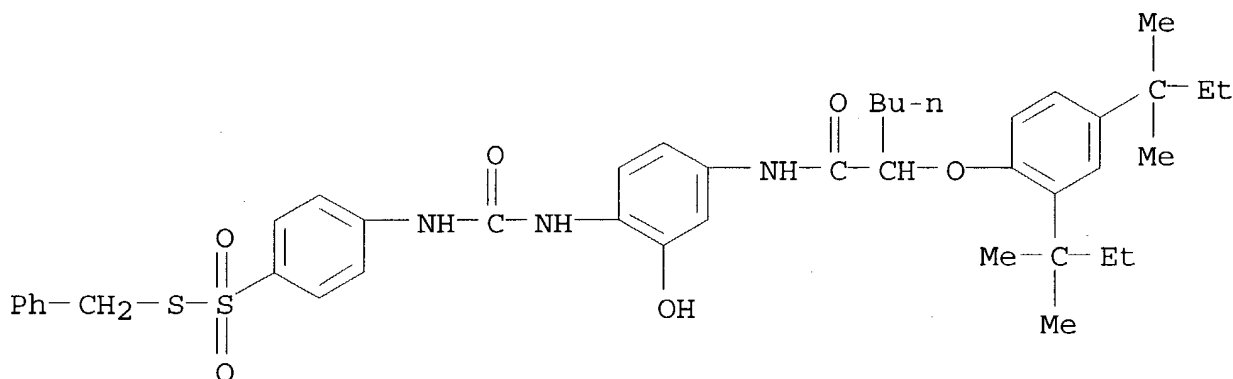


RN 99504-55-9 HCA  
 CN Benzenesulfonyl 4-[[[4-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]-5-(4-ethoxyphenoxy)-2-hydroxyphenyl]amino]carbonyl]amino]-, S-(phenylmethyl) ester (9CI)  
 (CA INDEX NAME)



RN 99517-92-7 HCA  
 CN Benzenesulfonyl 4-[[[4-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]-2-hydroxyphenyl]amino]carbonyl]amino]-, S-(phenylmethyl) ester (9CI)  
 (CA INDEX NAME)

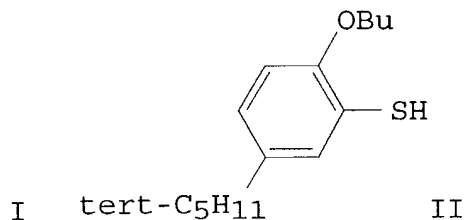
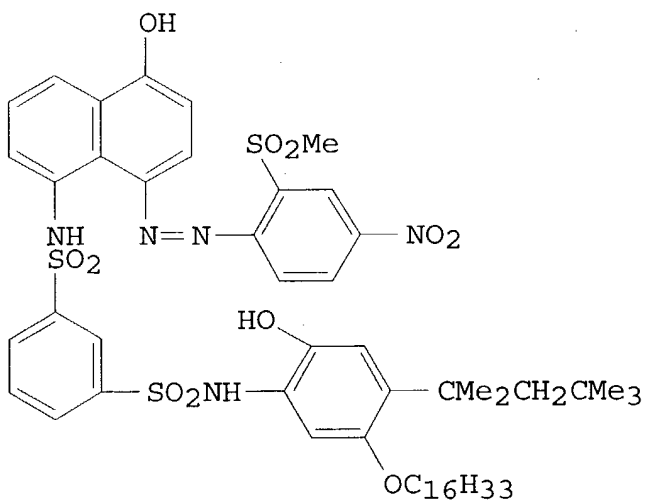




IC ICM G03C007-34  
 CC 74-2 (Radiation Chemistry, Photochemistry, and  
 Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 41  
 ST cyan coupler phenol deriv **photog**  
 IT **Photographic** couplers  
 (cyan, phenylureido-substituted phenol derivs. as)  
 IT 99504-51-5 99504-52-6 99504-53-7  
 99504-54-8 99504-55-9 99517-92-7  
 (photog. cyan coupler)

L45 ANSWER 23 OF 26 HCA COPYRIGHT 2003 ACS  
 102:15191 Heat-developable color **photographic**  
 material. Sawada, Satoru; Yabuki, Yoshiharu (Fuji Photo Film Co.,  
 Ltd., Japan). Ger. Offen. DE 3345023 A1 **19840620**, 155  
 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1983-3345023  
 19831213. PRIORITY: JP 1982-222247 19821217.

GI



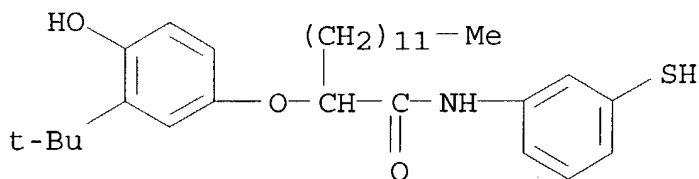
AB A thermally **developable** color **photog.** material giving sharp and stable color **images** with high color d. and low fog is comprised of .gtoreq.1 **Ag halide**, a hydrophilic binder, a hydrophilic dye-releasing redox compd., and a compd. of the formula RSM (R = alkyl, cycloalkyl, aralkyl, alkenyl, or aryl; and M = H, Ag, alkali metal, or ammonium). Thus, a poly(ethylene terephthalate) support was coated with a compn. contg. a gelatin-Ag(Br,I) emulsion 25, a dispersion contg. I 33 g, a soln. of guanidine trichloroacetate 1.5 g in EtOH 15 mL, a 5% aq. soln. of polyethylene glycol nonylphenyl ether 10 mL, and a soln. of II 0.05 g in MeOH 5 mL at 60 .mu.m wet, dried, exposed for 10 s with 2000 lx using a W lamp, then heated for 40 s at 130.degree., contacted with a receptor sheet, and passed through a heated roller set at 80.degree. to show a Dmax of 2.10 and a Dmin of 0.14 vs. 2.21 and 0.34, resp., for a II-free control.

IT 93608-60-7

(heat-**developable** color **photog.** material contg. dye-releasing redox compd. and)

RN 93608-60-7 HCA

CN Tetradecanamide, 2-[3-(1,1-dimethylethyl)-4-hydroxyphenoxy]-N-(3-mercaptophenyl)- (9CI) (CA INDEX NAME)



IC G03C005-54

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST heat **developable** color **photog** material; thiol deriv heat **developable photog**; photothermog color thiol deriv; dye releasing redox compd **photog**

IT Thiols, uses and miscellaneous

(heat-**developable** color **photog.** materials contg. dye-releasing redox compd. and)

IT Photothermography

(color, heat-**developable** compns. contg. dye-releasing redox compd. and thiol deriv. for)

IT **Photographic** films

(color, heat-**developable**, contg. dye-releasing redox compd. and thiol. deriv.)

IT 93608-59-4 93608-60-7 93608-61-8 93608-62-9  
93608-63-0 93608-64-1 93608-65-2

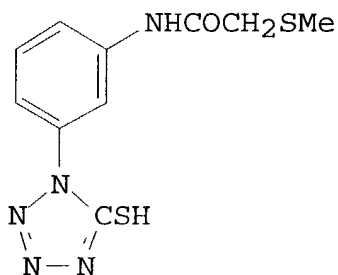
(heat-**developable** color **photog.** material contg. dye-releasing redox compd. and)

IT 22257-44-9 26027-38-3

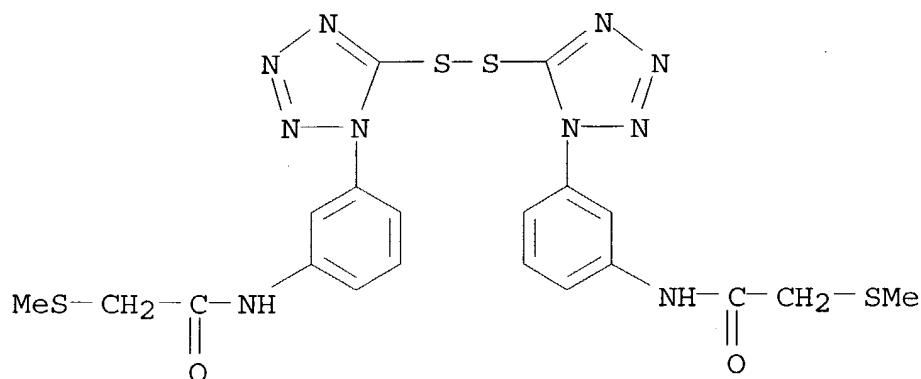
- (heat-developable color photog. materials contg. dye-releasing redox compd. and thiol deriv. and)
- IT 93369-39-2 93693-74-4  
(photog. dye-releasing redox compd., heat-developable color materials contg. thiol deriv. and)
- IT 53845-09-3P  
(prepn. and photog. applications of)

L45 ANSWER 24 OF 26 HCA COPYRIGHT 2003 ACS  
97:101669 Antifogging compounds and their use in **silver halide photography**. Pollet, Robert Joseph; Vandenberghe, Antoon Leon; Spriet, Roger Alois (Agfa-Gevaert N. V., Belg.). Eur. Pat. Appl. EP 53851 A1 **19820616**, 19 pp.  
DESIGNATED STATES: R: BE, DE, FR, GB. (English). CODEN: EPXXDW.  
APPLICATION: EP 1981-201277 19811119. PRIORITY: GB 1980-39457 19801209.

GI



- AB Antifogging agents which have good antifogging properties and increase the speed of **photog.** emulsions are 1-phenyl-5-mercaptotetrazole derivs. whose Ph group contains a thioether substituent. Thus, a **photog.** support coated with a Ag(Br,I) gelatin emulsion (6 mol% of I-) contg I 0.35 mmol/**Ag halide** mol was imagewise exposed and **developed** to show fog, .gamma. and speed (measured at d. 0.1 above fog) of 0.1, 1.5 and 93, resp., vs. 0.14, 1.47 and 87, resp., for a control contg 1-phenyl-5-mercaptotetrazole instead of I.
- IT **82829-73-0P**  
(**photog.** antifogging agent, prepn. of)
- RN 82829-73-0 HCA
- CN Acetamide, N,N'-[dithiobis(1H-tetrazole-5,1-diyl-3,1-phenylene)]bis[2-(methylthio)- (9CI) (CA INDEX NAME)



- IC G03C001-34; C07D257-04; C07D277-72; C07D263-58; C07D235-28  
 CC **74-2** (Radiation Chemistry, Photochemistry, and  
 Photographic and Other Reprographic Processes)  
 ST antifogging agent phenylmercaptotetrazole deriv **photog**;  
 fog inhibitor phenylmercaptotetrazole thioether deriv  
 IT **Photographic** fog inhibitors  
 (phenylmercaptotetrazole derivs. contg. thioether substituent in  
 Ph group as)  
 IT 82829-68-3P 82829-69-4P 82829-70-7P 82829-71-8P 82829-72-9P  
**82829-73-0P** 82829-74-1P 82840-67-3P  
 (photog. antifogging agent, prepn. of)

L45 ANSWER 25 OF 26 HCA COPYRIGHT 2003 ACS

94:112463 **Photographic silver halide** color

material containing two-equivalent magenta couplers. Ichijima, Seiji; Seto, Nobuo; Watanabe, Toshiyuki; Furutachi, Nobuo (Fuji Photo Film Co., Ltd., Japan). Ger. Offen. DE 2944601 **19800514**, 52 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1979-2944601 19791105.

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Color **photog.** materials giving better magenta dye formation yields with decreased amts. of magenta coupler and **Ag halide** contain 2-equiv. magenta couplers having the formula I (R = anilino, acylamino, or ureido; R<sub>1</sub> = alkyl, aralkyl, or alkenyl; R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> = H, alkyl, halo, alkoxy, aryloxy, acylamino, carbamoyl, sulfamoyl, sulfonyl, CN, alkoxy carbonyl). The materials contg. these couplers are not affected by the pH of the **developer** and the resulting dye **images** are lightfast and heatfast. Thus, II 10.7 g was dissolved in a mixt. of EtOAc 20 and tricresyl phosphate 10 mL. This soln. was then dispersed in 10% aq. gelatin 80 g, the dispersion then mixed with a

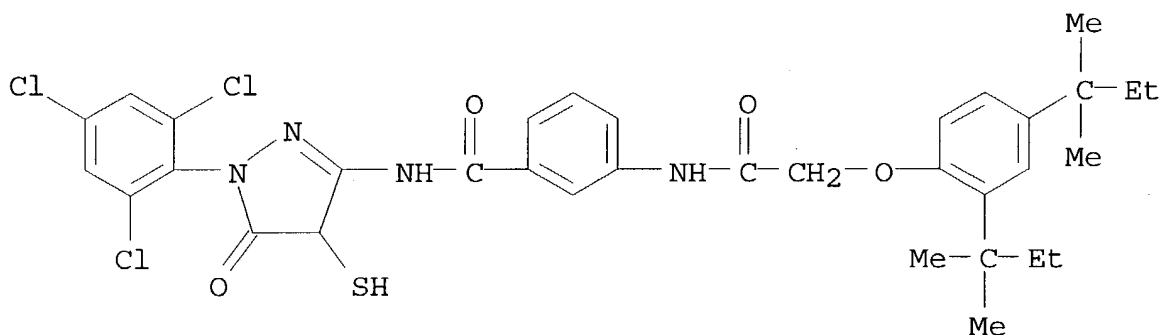
green-sensitive gelatin-Ag(Cl,Br) emulsion (7 g Ag) contg. Na dodecylbenzenesulfonate, coated on a polyethylene laminated paper, dried, a gelatin protective layer added, and the material then sensitometrically exposed at 1 s to 100 lx. Upon **development** a Dmax of 1.95, a Dmin of 0.09, and a color yield of 85% were obtained vs. 1.50, 0.08, and 45%, resp., for a control contg. III 10 g.

IT 74726-35-5P

(prepn. and reaction of, with halides)

RN 74726-35-5 HCA

CN Benzamide, 3-[[[2,4-bis(1,1-dimethylpropyl)phenoxy]acetyl]amino]-N-[4,5-dihydro-4-mercapto-5-oxo-1-(2,4,6-trichlorophenyl)-1H-pyrazol-3-yl]- (9CI) (CA INDEX NAME)



IC G03C007-38

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)

ST phenylpyrazolone deriv magenta **photog** coupler

IT **Photographic** couplers

(two-equiv., magenta, phenylpyrazolonethiols as)

IT 74677-28-4 74677-30-8 76267-65-7

(magenta two-equiv. **photog.** coupler)

IT 74726-35-5P

(prepn. and reaction of, with halides)

L45 ANSWER 26 OF 26 HCA COPYRIGHT 2003 ACS

62:6891 Original Reference No. 62:1248d-f **Photographic** products. Celeste, Jack R.; Cohen, Abraham B. (E. I. du Pont de Nemours & Co.). US 3155515 **19641103**, 5 pp. (Unavailable). APPLICATION: US 19621108.

AB **Ag halide** compns. comprise **Ag**

**halide** crystals which have been treated with greater than fog-inhibiting amts. of an acylamino thiophenol having at least 1 form represented by the formula RCONHC<sub>6</sub>H<sub>4</sub>SH-p, where R is a hydrocarbon radical and whose Ag salt is less sol. in H<sub>2</sub>O than **AgCl**. When a **Ag halide** dispersion is protected by such a compd., treatment with a 10% by wt. aq. Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> (I) soln. leaves at least 3 times the amt. **Ag halide** undissolved as in a similar dispersion successively

treated with 5% aq. NaOCl and 10% aq. I, after vigorous agitation of the dispersions for 30 sec. at 25.degree.. Thus, a **photographic** emulsion was redispersed in a 5% gelatin soln. contg. 47 g. gelatin per mole of the **Ag halide**.

A pH of 6.0  $\pm$  0.1 was maintained while dispersing 10 min. at 110.degree.F. The emulsion was brought to 2320 g. by the addn. of H<sub>2</sub>O and the temp. adjusted to 120.degree.F.; 0.4 g. of 4-(isobutyrylamino)thiophenol was added per mole of **Ag halide** from a 1% by wt. EtOH soln. Cr alum hardener was added and the emulsion was dild. with H<sub>2</sub>O to a total wt. of 2334 g. per mole of **Ag halide**. A **photographic**

film base coated with this emulsion, when heated with a solvent to remove exposed **Ag halide** and then treated with a fogging **developer** (cf. U.S. 3,155,507), gave a **Ag image** with optical ds. of completely unexposed areas and heavily exposed areas of the film of 1.11 and 0.05, resp.

IT 2182-90-3, Benzanilide, 4'-mercapto-4-(pentyloxy)-

2457-82-1, Terephthalanilide, 4',4''-dimercapto-

2488-85-9, Phthalanilide, 4',4''-dimercapto-

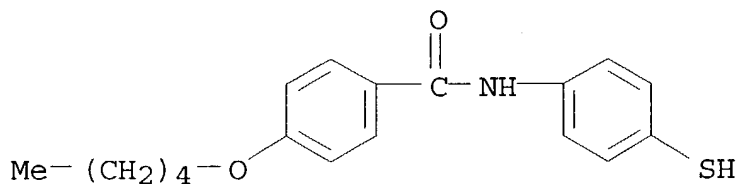
2642-22-0, Benzanilide, 4'-mercapto-4-nitro-

2642-23-1, p-Anisanilide, 4'-mercapto-

(prepn. of)

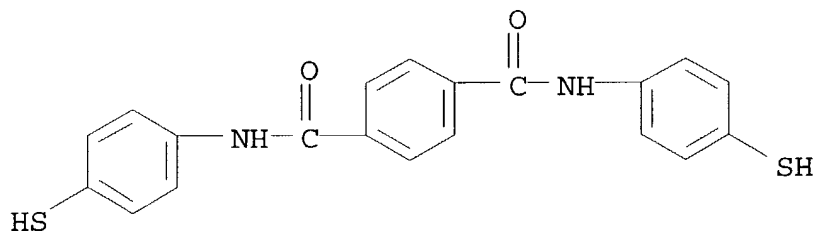
RN 2182-90-3 HCA

CN Benzanilide, 4'-mercapto-4-(pentyloxy)- (7CI, 8CI) (CA INDEX NAME)



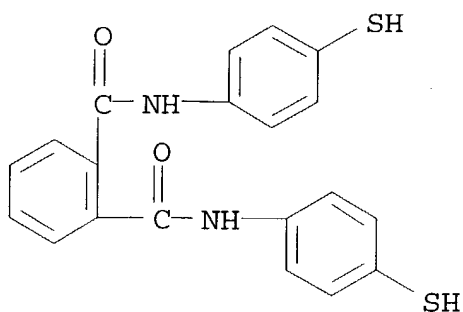
RN 2457-82-1 HCA

CN Terephthalanilide, 4',4''-dimercapto- (7CI, 8CI) (CA INDEX NAME)



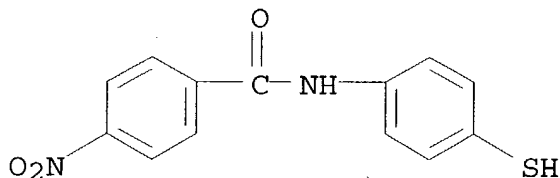
RN 2488-85-9 HCA

CN Phthalanilide, 4',4''-dimercapto- (7CI, 8CI) (CA INDEX NAME)



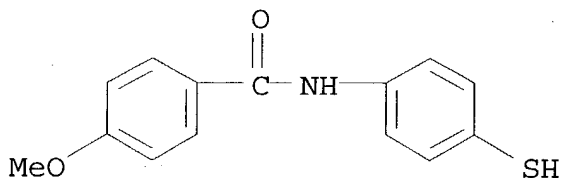
RN 2642-22-0 HCA

CN Benzanilide, 4'-mercapto-4-nitro- (7CI, 8CI) (CA INDEX NAME)



RN 2642-23-1 HCA

CN p-Anisanilide, 4'-mercapto- (7CI, 8CI) (CA INDEX NAME)



NCL 096107000

CC 11 (Radiation Chemistry and Photochemistry)

IT Amides

(N-(p-mercaptophenyl), **photographic** direct-positive emulsion treatment with)

IT 2182-83-4, Hexananilide, 4'-mercapto- 2182-86-7, Butyranilide, 4'-mercapto-3-methyl- 2182-87-8, Octananilide, 4'-mercapto-2182-88-9, Dodecananilide, 4'-mercapto- 2182-89-0, 1-Naphthanilide, 4'-mercapto- **2182-90-3**, Benzanilide, 4'-mercapto-4-(pentyloxy)- 2182-91-4, Cyclohexanecarboxanilide, 4'-mercapto- 2182-92-5, Propionanilide, 4'-mercapto-2,2-dimethyl-**2457-82-1**, Terephthalanilide, 4',4''-dimercapto-**2488-85-9**, Phthalanilide, 4',4''-dimercapto-**2642-22-0**, Benzanilide, 4'-mercapto-4-nitro-**2642-23-1**, p-Anisanilide, 4'-mercapto-(prepn. of)